

ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK

GARAGE G11 TYPE "E"

ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK

GARAGE BUILDING "E"

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT INFORMATION

SITE DATA	
SITE ZONING:	(SEE CIVIL)
SITE SIZE:	(SEE CIVIL)
SITE DENSITY:	(SEE CIVIL)
NO. OF PARKING SPACES:	(SEE CIVIL)
CODES AND REGULATIONS	
BLDG. & RELATED CODES:	2018 IPC, IPC, IMC & 2018 IECC
ELECT. CODE:	2017 NEC
FIRE CODE:	2018 IFC
ACCESSIBILITY:	ICC/ANSI A117.1- 2009
MISC.:	ALL APPLICABLE FEDERAL, STATE & LOCAL CODES, LAWS & ORDINANCES
BUILDING CODE DATA	
USE GROUP:	U (PRIVATE GARAGES)
CONSTRUCTION TYPE:	VB
EXT. WALL CONSTRUCTION:	NON-RATED
OTHER WALL CONSTRUCTION:	SEPARATION WALLS = NON-RATED
TOTAL ALLOW. AREA:	5,500 SF/FLOOR
TOTAL ACTUAL AREA:	2,264 SF
ALLOW. HEIGHT & FLOORS:	40'-0" / 1 STORY
ACTUAL HEIGHT & FLOORS:	22'-6 5/8" / 1 STORY
HEIGHT/AREA ADJUSTMENTS:	NONE REQUIRED, NONE TAKEN
SPRINKLER SYSTEM:	N/A

INDEX TO DRAWINGS

GARAGE BUILDING INDEX TO DRAWINGS					
Sheet Number	Sheet Name	Sheet Issue Date	Current Revision Date	Current Revision Description	
1 - COVER SHEET					
0.0GE	GARAGE BUILDING "E" COVER SHEET	15 APR 2025	15 APR 2025	ISSUE SET	
SP1.0GE	SPECIFICATIONS	15 APR 2025	15 APR 2025	ISSUE SET	
SP1.1GE	SPECIFICATIONS	15 APR 2025	15 APR 2025	ISSUE SET	
SP1.2GE	SPECIFICATIONS	15 APR 2025	15 APR 2025	ISSUE SET	
2 - STRUCTURAL (BY CROCKETT ENGINEERING CONSULTANTS)					
GS100	GENERAL STRUCTURAL DATA	15 APR 2025	15 APR 2025	ISSUE SET	
GS200	FOUNDATION PLAN (BLDG, G11)	15 APR 2025	15 APR 2025	ISSUE SET	
GS210	FOUNDATION DETAILS	15 APR 2025	15 APR 2025	ISSUE SET	
GS211	FOUNDATION DETAILS	15 APR 2025	15 APR 2025	ISSUE SET	
GS300	ROOF FRAMING PLAN	15 APR 2025	15 APR 2025	ISSUE SET	
GS310	ROOF FRAMING DETAILS	15 APR 2025	15 APR 2025	ISSUE SET	
3 - ARCHITECTURAL					
A1.0GE	GARAGE "E" BUILDING PLAN/FINISH PLAN	15 APR 2025	15 APR 2025	ISSUE SET	
A2.0GE	GARAGE "E" ROOF PLAN	15 APR 2025	15 APR 2025	ISSUE SET	
A3.0GE	GARAGE "E" EXTERIOR ELEVATIONS	15 APR 2025	15 APR 2025	ISSUE SET	
A4.0GE	WALL SECTIONS & DETAILS	15 APR 2025	15 APR 2025	ISSUE SET	
4 - MEP (BY J-SQUARED ENGINEERING)					
MEP1	ELECTRICAL PLAN COVER SHEET	15 APR 2025	15 APR 2025	ISSUE SET	
MEP2	SITE UTILITIES PLAN	15 APR 2025	15 APR 2025	ISSUE SET	
EP101	POWER PLAN	15 APR 2025	15 APR 2025	ISSUE SET	
EL101	LIGHTING PLAN	15 APR 2025	15 APR 2025	ISSUE SET	

ARCHITECT'S JOB NO. 4938

PROJECT LOCATION MAP



SIGNATURE AREAS

NOTE: PROJECT CONSTRUCTION MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES, ORDINANCES, LAWS, AND REGULATIONS AS ENUMERATED ELSEWHERE IN THE PLANS AND SPECIFICATIONS.

ARCHITECT: WALLACE ARCHITECTS, L.L.C.
302 CAMPUSVIEW DRIVE SUITE 208, COLUMBIA, MO 65201

BY: _____ DATE: _____

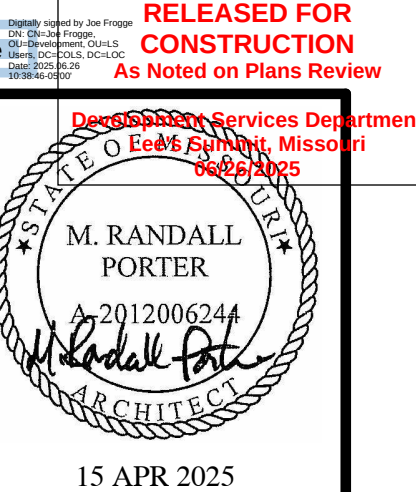
OWNER: SPRINGBROOK PARK APARTMENTS, LLC
3622 ENDEAVOR AVE., STE. 101, COLUMBIA, MO 65201
BY:

CONTRACTOR: INTRINSIC DEVELOPMENT, LLC
3622 ENDEAVOR AVE., STE. 101, COLUMBIA, MO 65201
BY:

PM: <u>RS</u>	DT: <u>TY</u>
PC: <u>CD</u>	QC: <u>MK</u>

PLAN SET NO. _____

ISSUE SET



ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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Columbia, MO
P 573-256-7200

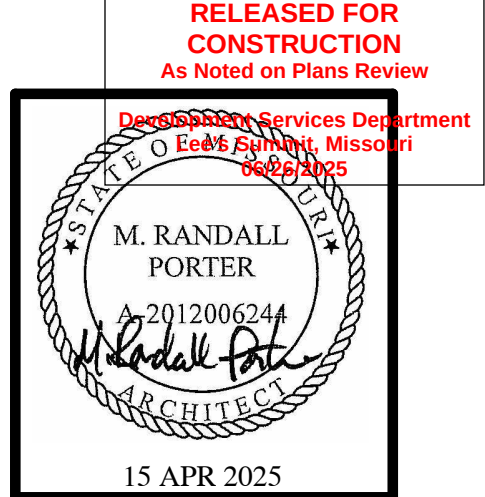
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M. RANDALL PORTER
ARCHITECT LICENSE#
A-2012006244

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

DELIVERY, STORAGE, AND HANDLING

Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
Prevent contact with materials that could cause discoloration or staining.

SHEET MATERIALS

Pre-Finished Aluminum: ASTM B209 (ASTM B209M); 20 gauge, (0.032 inch) thick; plain finish shop pre-coated with modified silicone coating.

FABRICATION

General: Provide prefinished aluminum sheet metal flashing at changes in adjacent siding materials and other flashing indicated, color as selected by Owner/Architect.
Form sections true to shape, accurate in size, square, and free from distortion or defects. Form pieces in longest possible lengths.

Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

COLLECTOR BOXES AND DOWNSPOUT FABRICATION

Collector Boxes: SMACNA (ASMM), Rectangular profile with visible overflow.

Downspouts: Rectangular profile.

Collector box and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10 years in accordance with SMACNA (ASMM).

EXTERIOR PENETRATION FLASHING PANELS

Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.

ACCESSORIES

Fasteners: Galvanized steel, with soft neoprene washers.

Concealed Sealants: Non-curing butyl sealant.

Exposed Sealants: ASTM C920, elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.

SECTION 07 71 23 - MANUFACTURED GUTTERS AND DOWNSPOUTS

DELIVERY, STORAGE, AND HANDLING

Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope to drain.
Prevent contact with materials that could cause discoloration, staining, or damage.

MATERIALS

Pre-Finished Aluminum Sheet: ASTM B209 (ASTM B209M); 0.027 inch thick.
Finish: Plain, shop pre-coated with acrylic coating.

COMPONENTS

Gutters: 6 inch K-style profile.

Downspouts: 3 inch by 4 inch Rectangular profile, minimum.

Anchor and Supports: Profiled to suit gutters and downspouts.

Gutter Supports: Straps.

Downspout Supports: Straps.

Fasteners: Same material and finish as gutters and downspouts, with soft neoprene washers.

FABRICATION

Form gutters and downspouts of profiles and size indicated.

Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints. Hem exposed edges of metal.

Fabricate gutter and downspout accessories; seal watertight.

FINISHES

Acrylic polyester coating: Baked enamel system complying with AAMA 2603.

ACCESSORIES

Offset Downspout Adapters: PVC adapter for connecting 3 inch x 4 inch downspouts to 4 inch solid white or green drain tile.

SECTION 07 92 00 - JOINT SEALANTS

MANUFACTURERS

Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
BASF Construction Chemicals-Building Systems: www.buildingsystems.basf.com.
Dow Chemical Company: www.dow.com.

GE Silicones Inc.: www.ge.com.

Pecora Corporation: www.pecora.com.

Sika Corporation: www.usa-sika.com.

Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.

JOINT SEALANT APPLICATIONS

Scope:

Exterior Joints:

Do not seal exterior joints unless indicated on drawings as sealed.

Seal the following joints:

Wall expansion and control joints.

Joints between doors, windows, and other frames or adjacent construction.

Joints between different exposed materials.

Flashing and adjacent building materials.

Vertical siding/masonry joints.

Sleeves or pipes penetrating exterior walls.

Sleeves or pipes penetrating masonry or concrete walls.

Openings below ledge angles in masonry.

Lap joints in and penetrations through weather barriers.

Exterior Siding:

Fiber-Cement Siding.

Interior Joints:

Do not seal interior joints indicated on drawings as not sealed.

Do not seal gaps and openings in gypsum board and suspended ceilings

Seal the following joints:

Joints between door frames and window frames and adjacent construction.

Gypsum board to wood or masonry.

Metal to gypsum board, wood, or masonry.

Perimeter of counter tops and vanity tops.

Perimeter of plumbing fixtures, shower surrounds, drains, or piping.

Do not seal the following types of joints:

Joints where sealant is specified to be furnished and installed by manufacturer of product to be sealed.

Joints where sealant installation is specified in other sections.

Additional Locations: In addition to locations listed or shown on the Drawings to receive continuous sealant materials, a continuous bead of sealant, appropriate to construction materials and locations, shall be provided/installed at:

Horizontal joint between bottom of wood sill plate and top of foundation wall or slab on grade.

Horizontal joint(s) between double/triple top plates.

Vertical joint(s) between double/triple studs in general framing and at door/window rough openings.

Stud cavities blocked at change in ceiling heights.

Penetrations through top and bottom plates.

Seam(s) in band joists.

Gaps in exterior wall sheathing.

Penetrations in exterior wall sheathing.

Penetrations in gypsum board of insulated exterior walls.

Exterior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.

Masonry Expansion Joints: Two-part polyurethane.

Metal to Masonry: Two-part polyurethane.

Lap Joints in Sheet Metal Fabrications: Two-part polyurethane, non-curing.

General Flashing and Flashing to Brick: One-part polyurethane.

Sleeves in Walls: One-part polyurethane.

Interior Joints: Use non-sag acrylic sealant, unless otherwise indicated.

Gypsum Board or Plaster to Masonry or Wood: Acrylic.

Metal to Gypsum Board, Plaster or Masonry: Acrylic.

Metal to Brick: Two-part polyurethane.

Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.

JOINT SEALANTS - GENERAL

Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

ACCESSORIES

Sealant Backing Rod, Closed-Cell Type:

Cylindrical flexible sealant backings complying with ASTM C1330 Type C.

Size: 25 to 50 percent larger in diameter than joint width.

Products:

Nomaco, Inc; HBR: www.nomaco.com/#sle.

Type: Woven polypropylene with anti-slip polyolefin coating on both sides.

Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.

Ultraviolet (UV) Resistance and Weatherability: Approved in writing by manufacturer for exposure to weather for minimum of two months.

Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.

Water Vapor Permeance: Vapor retarder; maximum of 1 perm, when tested in accordance with ASTM E96/E96M Procedure A, desiccant method.

Products:

CertainTeed Roofing, DiamondDeck Underlayment: www.certainteed.com/#sle.

Beacon Roofing Supply Inc; Tri-Built Synthetic Underlayment: www.becon.com.

Underlayment: Asphalt-saturated organic roofing felt, unperforated, complying with ASTM D226/D226M, Type I, No. 15.

ACCESSORIES

Roofing Nails: Standard round wire shingle type, galvanized steel, minimum 3/8 inch head diameter, 12 gauge, 0.109 inch nail shank diameter, 1-1/2 inch long and complying with ASTM F1667.

Cut Nails: Standard round wire shingle type, barbed shank, of electro-galvanized steel, 11 - 12 wire gage, 0.125 - 0.109 inch shank diameter, 3/8 inch head diameter, of sufficient length to penetrate through roof sheathing or 3/4 inch into roof sheathing or decking.

Roof Vents: Aluminum construction with nailing flange and insect screen; equal to Model RVA 50 manufactured by Air Vent Inc.

Free Vent Area (net): 50 square inches.

Size of Roof Opening: 8 inch round.

METAL FLASHINGS

General: Provide prefinished aluminum sheet metal flashing at eave edge, gable edge, fascia, and gable face, color as selected by Owner/Architect.

Drip Flashings: Pre-formed drip-edge strips, 28 gauge, 0.0149 inch, furnished in 10 foot lengths minimum.

Profile: Equal to Amerimax profile # FHA

Manufacturers:

Amerimax: www.amerimax.com

Or approved equal.

Fascia and Gable Flashing: Pre-formed or site-fabricated sheet metal fascia and gable board cladding, 24 gauge, 0.0201 inch minimum thickness.

Hem exposed edges of flashings minimum 1/4 inch on underside.

SECTION 07 46 46 - FIBER-CEMENT SIDING

FIBER-CEMENT SIDING

Lap Siding: Individual horizontal boards made of cement and cellulose fiber formed under high pressure with integral surface texture, in compliance with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment.

Style: Standard lap style.

Texture: Simulated cedar grain.

Length: 12 feet, nominal.

Width (Height): 9-1/2 inches.

Thickness: 7/16 inch, nominal.

Finish: Factory applied primer.

Warranty: 50 year limited; transferable.

Products:

Allura, a division of Plycem USA, Inc.: www.allurausa.com/#sle.

James Hardie Building Products, Inc.: www.jameshardie.com/#sle.

Nichiha USA, Inc.: www.nichiha.com/#sle.

ACCESSORIES

Trim: Same material and texture as siding.

Flashing: Aluminum; 26 gage, 0.0179 inch minimum base metal thickness.

SEALANTS

Sealant: Elastomeric, polyurethane or silyl-terminated polyether/polyurethane, and capable of being painted.

SECTION 07 54 00 - THERMOPLASTIC MEMBRANE ROOFING

DELIVERY, STORAGE, AND HANDLING

Store materials in weather protected environment, clear of ground and moisture.

Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

FIELD CONDITIONS

Do not apply roofing membrane when ambient temperature is below 40 degrees F or above 90 degrees F.

Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

MANUFACTURERS

Thermoplastic Polyolefin (TPO) Membrane Roofing Materials:

Carlisle Roofing Systems, Inc; Sure-Weld TPO: www.carlisle-syntec.com.

Firestone Building Products, LLC; UltraPly Platinum: www.firestonebpc.com.

GAF; EverGuard Extreme TPO 60 mil: www.gaf.com.

Johns Manville; JM TPO - 60 mil: www.jm.com.

Insulation:

BASF Corporation; BASF Neopor GPS: www.neopor.basf.us.

Carlisle SynTec; SecurShield Insulation: www.carlisle-syntec.com.

GAF; EnergyGuard Polyiso: www.gaf.com.

Versico Roofing Systems; SecurShield Insulation: www.versico.com/#sle.

ROOFING - UNBALLASTED APPLICATIONS

Thermoplastic Membrane Roofing: One ply membrane, fully adhered, over vapor retarder and insulation.

Roofing Assembly Requirements:

Solar Reflectance Index (SRI): Minimum of 64 based on three-year aged value; if three-year aged data is not available, minimum of 82 initial value.

Calculate SRI in accordance with ASTM E1980.

Field applied coating may not be used to achieve specified SRI.

Roof-Ceiling Fire Resistance Rating: Comply with UL (FRD) Assembly Design No. P566.

Insulation Thermal Resistance (R-value): 5 per inch, minimum; provide insulation of thickness required.

Acceptable Insulation Types - Constant Thickness Application:

Minimum 2 layers of polyisocyanurate board.

Primer, Roof Coating: Water-based primer with high-tack finish that promotes adhesion for elastomeric roof coatings.

MEMBRANE ROOFING AND ASSOCIATED MATERIALS

Membrane Roofing Materials:

TPO: Thermoplastic polyolefin (TPO) complying with ASTM D6878/D6878M, sheet contains reinforcing fabrics or scrim.

Thickness: 60 mil, 0.060 inch, minimum.

Color: White.

Seaming Materials: As recommended by membrane manufacturer.

Vapor Retarder: Material approved by roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials.

Flexible Flashing Material: Same material as membrane.

COVER BOARDS

Cover Boards: Glass-mat faced gypsum panels complying with ASTM C1177/C1177M.

Thickness: 1/2 inch, fire-resistant.

Products:

Georgia-Pacific; DensDeck: www.densdeck.com.

INSULATION

Total Thermal Resistance: Provide a total R-value of 30 above all conditioned spaces.

Polyisocyanurate (ISO) Board Insulation: Rigid cellular foam, complying with ASTM C1289.

Classifications:

Type I: Faced with either cellulosic facers or glass fiber mat facers on both major surfaces of the core foam.

Class 1 - Faced with glass fiber reinforced cellulosic felt facers on both major surfaces of core foam.

Board Thickness: 4.0 inches.

ACCESSORIES

Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane.

Cant and Edge Strips: Wood fiberboard, compatible with roofing materials; cants formed to 45 degree angle.

Insulation Joint Tape: Glass fiber reinforced tape as recommended by insulation manufacturer, compatible with roofing materials; 6 inches wide; self adhering.

Membrane Adhesive: As recommended by membrane manufacturer.

Surface Conditioner for Adhesives: Compatible with membrane and adhesives.

Thinners and Cleaners: As recommended by adhesive manufacturer, compatible with membrane.

Insulation Adhesive: As recommended by insulation manufacturer.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

SECTION 07 21 00 - THERMAL INSULATION

FIELD CONDITIONS

Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

FOAM BOARD INSULATION MATERIALS

Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces.

Type: ASTM C578, Type IV.

Type and Thermal Resistance, R-value: Type IV, 5.0 (0.88), minimum, per 1 inch thickness at 75 degrees F mean temperature.

Products:

DuPont de Nemours, Inc; Styrofoam Brand Highload 40: building.dupont.com.

Kingspan Insulation LLC; GreenGuard XPS Type IV, 25 psi: www.kingspan.com.

Owens Corning Corporation; FOAMULAR Extruded Polystyrene (XPS) Insulation: www.owenscorning.com.

GLASS FIBER BLANKET INSULATION MATERIALS

Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.

Thermal Resistance at exterior walls: R-value of 20 minimum.

Facing: Kraft paper.

Products:

CertainTeed Corporation: www.certainteed.com.

Johns Manville: www.jm.com.

Owens Corning Corporation: www.owenscorning.com.

FOAM INSULATION

Single component polyurethane, low pressure foam sealant complying with ASTM E2178 for exterior wall penetrations.

R-value: 1 inch of material at 72 degrees F: 4.7, minimum.

Minimum Density: 1.0 pounds per cubic foot.

Manufacturers:

Dow Chemical Co.; Great Stuff: www.greatstuff.dow.com.

FOMO Products Inc.; Handi Foam: www.fomo.com/handifoam.

Touch 'n Seal Inc.; All Seasons: www.touch-n-seal.com.

Single component polyurethane, low pressure, low pressure build, foam sealant complying with ASTM E2178 for windows and doors.

R-value: 1 inch of material at 72 degrees F: 4.7, minimum.

Minimum Density: 1.10 pounds per cubic foot.

Manufacturers:

Dow Chemical Co.; Great Stuff Window & Door: www.greatstuff.dow.com.

FOMO Products Inc.; Handi Foam Window & Door: www.fomo.com/handifoam.

Touch 'n Seal Inc.; No Warp: www.touch-n-seal.com.

ACCESSORIES

Tape: Reinforced polyethylene film with acrylic pressure sensitive adhesive.

Insulation Fasteners: Lengths of unfinished, 13 gauge, 0.072 inch high carbon spring steel with chisel or mitered tips, held in place by tension, length to suit insulation thickness and substrate, capable of securely supporting insulation in place.

Adhesive: Type recommended by insulation manufacturer for application.

SECTION 07 21 26 - BLOWN INSULATION

DIVISION 08 - OPENINGS
SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

DELIVERY, STORAGE, AND HANDLING

Protect with resilient packaging; avoid humid build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

MANUFACTURERS

Hollow Metal Doors and Frames:
Fleming Door Products, an Assa Abloy Group company: www.assaabloydss.com.
Republic Doors, an Allegion brand: www.republidoor.com.
Steelcraft, an Allegion brand: www.allegion.com.

PERFORMANCE REQUIREMENTS

Requirements for Hollow Metal Doors and Frames:
Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) type B, for each.
Accessibility: Comply with ICC A117.1 and ADA Standards.
Typical Door Face Sheets: Embossed.
Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvanized) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
Based on SDI Standards: Provide at least A40/ZF120 (galvanized) and when necessary, coating not required for typical interior door applications, and at least A60/ZF180 (galvanized) for corrosive locations.

HOLLOW METAL DOORS

Fire-Rated Doors:
Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
Level 1 - Standard-duty.
Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
Edge Seam: Model 1 - Full Flush.
Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.
Fire Rating: 3/4 hour, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
Provide units listed and labeled by UL (DIR).
Door Thickness: 1-3/4 inches, nominal.

HOLLOW METAL FRAMES

Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

Door Frames, Fire-Rated: Knock-down type.

Fire Rating: Same as door, labeled.

FINISHES

Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

SECTION 08 11 20 - RESIDENTIAL STEEL ENTRY DOORS

DELIVERY, STORAGE, AND HANDLING

Package, deliver and store doors in accordance with specified quality standard.
Protect doors with resilient packaging. Do not store in damp or wet areas, or in areas of direct sunlight.

MANUFACTURERS

Bayer Built Inc; Select Steel Series: www.bayerbuilt.com.
Stanley Door Products; Sta-Tru Series: www.stanleydoors.com.

COMPONENTS

Garage Building Entry Door:

Configuration: Single door.

Pool Building Machine Room Doors:

Configuration: Double doors.

Frames: Provided and assembled by third party fabricators to manufacturer's specifications.

Frame: Milled from 5/4 kiln-dried white pine, finger-jointed composite at bottom of frame, profiled 1/2 inch stops, and factory-clad with prefinished metal or vinyl. Provide 6 degree sill gain prep.
Frame Depth: 4-9/16 inch, minimum.

Thresholds: Refer to Section 08 71 00 - Door Hardware.

Weatherstripping: Jacketed thermoset closed-cell foam, press-fit in kerfs at jamb stops in frames.

Door Sweeps: Extruded thermoplastic elastomer, finned and chambered design, press-fit into bottom edge of doors.

PERFORMANCE REQUIREMENTS

Comply with AAMA/WDMA/CSA 101/1.S.2/A440 requirements in accordance with the following:

Performance Class (PC): R.

Design Pressure (DP): In accordance with applicable codes.

Water Penetration Resistance: No uncontrolled leakage on interior face when tested in accordance with ASTM E547 at differential pressure of 15 percent of Performance Grade (PG).

Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.

Thermal Transmittance: U-factor of 0.35, maximum, that includes window glazing, door and frame system based on average window size required for project and determined in accordance with NFRC 100.

Forced Entry Resistance (FER): Tested to comply with ASTM F478 requirements having at least Grade 10 performance for each required swinging door assembly.

FABRICATION

Fabricate doors in accordance with door quality standard specified.

Cores constructed with stiles and rails:

Provide solid blocks at look edge for hardware reinforcement.
Provide solid blocking for other thru-bolled hardware where scheduled.

Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

SECTION 08 36 13 - SECTIONAL OVERHEAD DOORS

SUBMITTALS

Product Data: Show component construction, anchorage method, and hardware.

MANUFACTURERS

Sectional Overhead Doors:
Cloday Building Products; Value Plus Series, Classic Collection: www.clodaydoor.com.
Overhead Door Corp.; Series 183, Traditional Collection: www.overheaddoor.com

Insulated Steel Patio Doors:
Taylor Entrance Systems; Edgewood: www.taylordoor.com.
Bayer Built Inc; Select Steel Series: www.bayerbuilt.com.
Stanley Door Products; Sta-Tru Series: www.stanleydoors.com.

COMPONENTS

Garage Building Entry Door:

Configuration: Single door.

Pool Building Machine Room Doors:

Configuration: Double doors.

Frames: Provided and assembled by third party fabricators to manufacturer's specifications.

Frame: Milled from 5/4 kiln-dried white pine, finger-jointed composite at bottom of frame, profiled 1/2 inch stops, and factory-clad with prefinished metal or vinyl. Provide 6 degree sill gain prep.
Frame Depth: 4-9/16 inch, minimum.

Thresholds: Refer to Section 08 71 00 - Door Hardware.

Weatherstripping: Jacketed thermoset closed-cell foam, press-fit in kerfs at jamb stops in frames.

Door Sweeps: Extruded thermoplastic elastomer, finned and chambered design, press-fit into bottom edge of doors.

PERFORMANCE REQUIREMENTS

Comply with AAMA/WDMA/CSA 101/1.S.2/A440 requirements in accordance with the following:

Performance Class (PC): R.

Design Pressure (DP): In accordance with applicable codes.

Water Penetration Resistance: No uncontrolled leakage on interior face when tested in accordance with ASTM E547 at differential pressure of 15 percent of Performance Grade (PG).

Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.

Thermal Transmittance: U-factor of 0.35, maximum, that includes window glazing, door and frame system based on average window size required for project and determined in accordance with NFRC 100.

Forced Entry Resistance (FER): Tested to comply with ASTM F478 requirements having at least Grade 10 performance for each required swinging door assembly.

FABRICATION

Fabricate doors in accordance with door quality standard specified.

Cores constructed with stiles and rails:

Provide solid blocks at look edge for hardware reinforcement.
Provide solid blocking for other thru-bolled hardware where scheduled.

Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

SECTION 08 36 13 - SECTIONAL OVERHEAD DOORS

SUBMITTALS

Product Data: Show component construction, anchorage method, and hardware.

MANUFACTURERS

Sectional Overhead Doors:
Cloday Building Products; Value Plus Series, Classic Collection: www.clodaydoor.com.
Overhead Door Corp.; Series 183, Traditional Collection: www.overheaddoor.com

Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
Glazing Rabbit: For 1 inch insulating glazing.
Glazing Position: Centered (front to back).
Finish: High performance organic coatings.
Finish Color: Black.

PERFORMANCE REQUIREMENTS

Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
Air Leakage: 0.06 cfm/sq ft maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf pressure difference.

COMPONENTS

Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.

Glazing Stops: Flush.

Cross-Section: 2 by 4.5 inch nominal dimension.

Swing Doors: Glazed aluminum.

Thickness: 1-3/4 inches.

Top Rail: 4 inches wide.

Vertical Stiles: 4-1/2 inches wide.

Bottom Rail: 10 inches wide.

Finish: Same as storefront.

MATERIALS

Extruded Aluminum: ASTM B221 (ASTM B221M).

Fasteners: Stainless steel.

Exposed Flashings: Aluminum sheet, 20 gauge, 0.032 inch minimum thickness; finish to match framing members.

Sealant for Setting Thresholds: Non-curing butyl type.

Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

FINISHES

High Performance Organic Coating: AAMA 2604; multiple coats, thermally cured fluoropolymer system.

Color: As selected by Owner from manufacturer's standard range.

HARDWARE

For each door, include weatherstripping, sill sweep strip, and threshold.

Other Door Hardware: Storefront manufacturer's standard type to suit application.

For each door, include butt hinges.

SECTION 08 53 13 - VINYL WINDOWS

DELIVERY, STORAGE, AND HANDLING

Protect finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

FIELD CONDITIONS

Do not install sealants when ambient temperature is less than 40 degrees F.

MANUFACTURERS

Vinyl Windows:
Alside, Inc; Series 1700: www.alside.com.
All Temp Windows Inc.; Series 1800: www.alltempwindows.com
Jeld-Wen Inc.; Builders Vinyl Series: www.jeldwen.com.

DESCRIPTION

Vinyl Windows: Factory fabricated frame and sash members of extruded, hollow, ultra-violet-resistant, polyvinyl chloride (PVC) with integral color; with factory-installed glazing, hardware, related flashings, anchorage and attachment devices.

Configuration: As indicated on drawings.

Product Type: H - Hung window, vertically sliding; Single Hung.

Product Type: FW - Fixed window.

Egress Units: Window units installed in dwelling unit bedrooms shall meet or exceed minimum requirements for classification as emergency egress units per the currently adopted edition of the building code.

Color: Black.

Energy Star Rating: Provide windows eligible for Energy Star Rating.

PERFORMANCE REQUIREMENTS

Grade: AAMA/WDMA/CSA 101/1.S.2/A440 requirements for specific window type:

Performance Class (PC): R.

Performance Grade (PG): 15, with minimum design pressure (DP) of 15.04 psf.

Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.

Thermal Transmittance: U-factor of 0.25, maximum, that includes window glazing and frame system based on average window size required for project and determined in accordance with AAMA 1505, ASTM E1423, or NFRC 100.

Solar Heat Gain Coefficient (SHGC): SHGC value of 0.40 maximum.

Visible Light Transmittance: value of 0.52 minimum.

COMPONENTS

Glazing: Insulated double pane, annealed glass, clear, low-E coated, argon filled, with glass thicknesses as recommended by manufacturer for specified wind conditions.

Frame Depth: 4-1/2 inch minimum.

Insect Screens: Aluminum, extruded or roll-formed frame with mitered and reinforced corners; apply screen mesh taut to frame; secure to window with hardware to allow easy removal.

Frame Finish: Manufacturer's standard, color to match window frame and sash color.

HARDWARE

Vertical Sliding Sash: Concealed, heavy duty block and tackle balancers, provide two for each sash and jamb.

Sash Lock: Lever handle and keeper with cam lock, provide at least one for each operating sash.

Window Opening Control Devices: ASTM F2090-13 opening control devices that limit opening size to less than 4 inches maximum with release function to permit window to open fully.

Required for all Dwelling Unit operable windows when sill is less than 36 inches above finish floor, and window unit is located greater than 72 inches above finish grade.

Finish of Exposed Hardware: Baked enamel, match interior sash and frame color.

SECTION 08 71 00 - DOOR HARDWARE

DESIGN AND PERFORMANCE CRITERIA

Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.

Provide door hardware products that comply with the following requirements:

Applicable provisions of federal, state, and local codes.

Accessibility: UFAS, ADA Standards, and ICC A117.1 as applicable.

Fire-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.

Hardware on Fire-Rated Doors: Listed and classified by UL (DIR) as suitable for application indicated.

HINGES

Hinges: Comply with BHMA A156.1, Grade 3.

Provide hinges on every swinging door.

Provide ball-bearing hinges at each door with closer.

Provide non-removable pins on exterior outswinging doors.

FLUSH BOLTS

Flush Bolts: Comply with BHMA A156.16, Grade 3.

Flush Bolt Throw: 3/4 inch, minimum.

Provides extension bolts in leading edge of door, one bolt into floor, one bolt into top of frame.

Pairs of Swing Doors: At inactive leaves, provide flush bolts of type as required to comply with code.

EXIT DEVICES

Manufacturers:
Corbin Russwin, Sargent, or Yale; an Assa Abloy Group company: www.assaabloydss.com.
Hager Companies: www.hagerco.com.
Von Duprin, an Allegion brand: www.allegion.com/us.

Exit Devices: Comply with BHMA A156.3, Grade 3.

Leverest design to match lockset trim.

Provide cylinder with cylinder dogging or locking trim.

Provide exit devices properly sized for door width and height.

Provide strike as recommended by manufacturer for application indicated.

CYLINDRICAL LOCKS

Manufacturers:
Basis of Design: Schlage 'Eian'.
Schlage, an Allegion brand: www.allegion.com/us.

Cylindrical Locks (Bored): Comply with BHMA A156.2, Grade 3.

Bored Hole: 2-1/8 inch diameter.

Latchbolt Throw: 1/2 inch, minimum.

Backset: 2-3/4 inch unless otherwise indicated.

AUXILIARY LOCKS (DEADLOCKS)

Manufacturers:
Basis of Design: Schlage 'B60' & 'B680'.
Yale; an Assa Abloy Group company: www.assaabloydss.com.
Hager Companies: www.hagerco.com.
Schlage, an Allegion brand: www.allegion.com/us.

Auxiliary Locks (Deadlocks): Comply with BHMA A156.36, Grade 3.

Type: Bored (cylindrical).

CLOSERS

Manufacturers:
Basis of Design: Falcon SC93/94; Jamb top.
BEST, dormakaba Group; EHD9000: www.bestaccess.com.
Sargent, Yale, or AdamsRite; an Assa Abloy Group company: www.assaabloydss.com.
Falcon or LCN, an Allegion brand: www.allegion.com/us.

Closers: Comply with BHMA A156.4, Grade 3.

Type: Surface mounted to door.

Provide door closer on each exterior door of the common areas.

At outswinging exterior doors, mount closer on interior side of door.

Provide adapter plate where required.

WALL STOPS

Manufacturers:

Basis of Design: Trimco 1270 Series.

Rockwood; an Assa Abloy Group company: www.assaabloydss.com.

Hiawatha, Inc, division of Activar Construction Products Group, Inc:

www.activarcpg.com/hiawatha.

Trimco: www.trimcohardware.com.

Wall Stops: Comply with BHMA A156.16, Grade 3 and Resilient Material Retention Test as described in this standard.

ASTRAGALS

Manufacturers:

Pemko; an Assa Abloy Group company: www.assaabloydss.com.

National Guard Products, Inc: www.ngpinc.com.

Standard Metal Hardware Manufacturing Ltd; Astragals: www.smhardware.com.

Astragals: Comply with BHMA A156.22.

Provide surface mounted astragal to cover or fill space for full door height between pair of doors or door and adjacent jamb.

Type: Split, two parts, and with sealing gasket.

Material: Aluminum, with neoprene weatherstripping.

THRESHOLDS

Manufacturers:

Pemko; an Assa Abloy Group company: www.assaabloydss.com.

Hager Companies: www.hagerco.com.

National Guard Products, Inc: www.ngpinc.com.

Thresholds: Comply with BHMA A156.21.

Provide threshold at each exterior door, unless otherwise indicated.

Type: Low Profile.

Thresholds at outswinging exterior doors may be rabbeted with door stop type; 1/4 inch vertical rise, 1/2 inch total height; maximum 1-2 bevel.

Material: Aluminum.

KEY CONTROL SYSTEMS

Key Control Systems: Comply with guidelines of BHMA A156.28.

FIRE DEPARTMENT LOCK BOX

Manufacturers:

Knox Company; Knox-Box Rapid Entry System, 3200 Series: www.knoxbox.com.

Fire Department Lock Box:

Heavy-duty, surface mounted, solid stainless-steel box with hinged door and interior gasket seal; single drill resistant lock with dust covers.

FINISHES

Finishes: Provide door hardware of same finish, unless otherwise indicated.

Primary Finish: 619; satin nickel plated, clear coated, with brass or bronze base material; BHMA A156.18.

HARDWARE SETS

Group No 01: Garage Building "B" Entry door.

3 EA Hinges - 3-1/2 inch x 3-1/2 inch
1 EA Dead latch - single cylinder with thumb turn
1 EA Locking Leverset
1 EA Accessible Threshold

Group No 02: Pool Building Paired Entry doors.

Provide for each leaf in pair.

3 EA Hinges - 3-1/2 inch x 3-1/2 inch
1 EA Exit Device with outside locking lever trimset
1 EA Head and floor extension rods; concealed
1 EA Closer
1 EA Accessible Threshold

Group No 03: Pool Building Exterior Door to Toilets

3 EA Hinges - 3-1/2 inch x 3-1/2 inch
1 EA Dead latch - Double cylinder
1 PR Locking leverset
1 EA Accessible Threshold

Group No 04: Pool Building Machine Room Double Doors

Provide for each leaf in pair.

3 EA Hinges - 3-1/2 inch x 3-1/2 inch
1 EA Dead latch - single cylinder with thumb turn - active leaf
1 EA Passage Leverset - active leaf
1 PR Flush Bolts; head/ floor - inactive leaf
1 Astragal
1 EA Threshold

Group No 05: Pool Building Machine Room Interior Door - 45 Min Fire-rated

Provide Fire-rated hardware.

3 EA Hinges - 3-1/2 inch x 3-1/2 inch
1 EA Dead latch - single cylinder with thumb turn
1 EA Locking Leverset
1 EA Closer

Group No 06: Pool Building Toilet Room Doors

3 EA Hinges - 3-1/2 inch x 3-1/2 inch
1 EA Privacy Leverset w/ push-button latching
1 EA Wall-mounted Stop

Group No 07: Pool Building secure Interior Doors

Commercial Toilet and Shower Accessories:

ASI - American Specialties, Inc.: www.americanspecialties.com.
Bradley Corporation: www.bradleycorp.com.
Bobrick Washroom Equipment Inc.: www.bobrick.com.

MATERIALS

Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
Stainless Steel Sheet: ASTM A666, Type 304.
Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
Adhesive: silicone, waterproof.
Fasteners, screws, and bolts: Corrosion resistant or stainless steel.

TOILET AND BATHROOM ACCESSORIES

Toilet Paper Dispenser: Single roll, surface mounted bracket type, nickel-plated solid brass.
Product: Candlestick Park #2209 manufactured by Better Homes Products, or equal.
Paper Towel Dispenser: Manual, roll paper type.
Cover: High-impact plastic.
Capacity: 8 inch diameter roll.
Mounting: Surface mounted.
Product: Model 2497 manufactured by Bradley, or equal.
Soap Dispenser: Liquid soap dispenser, wall-mounted, surface, with stainless steel cover and horizontal stainless steel tank and working parts; push type soap valve, check valve, and window gauge refill indicator, tumbler lock.
Products:
Model # B4112 manufactured by Bobrick, or equal..
Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM C1503.
Size: As indicated on drawings.
Grab Bars: Stainless steel, textured surface.
Standard Duty Grab Bars:
Dimensions: 1-1/2 inch outside diameter, minimum 0.05 inch wall thickness, concealed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
Finish: Safety-grip.
Product: Series 632 manufactured by Bradley, or equal.

SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES

MANUFACTURERS

Fire Extinguishers:
Kidde, a unit of United Technologies Corp: www.kidde.com.
Nystrom, Inc: www.nystrom.com.
Pyro-Chem, a Tyco Business: www.pyrochem.com.

FIRE EXTINGUISHERS

Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
Exterior Finish: Porcelain enameled steel, color as selected by Owner.
Manufacturers:
To be selected by Owner.
Size: 5 pound; For installation in Community Room and Machine room.

ACCESSORIES

DIVISION 11 - EQUIPMENT

SECTION 11 30 13 - RESIDENTIAL APPLIANCES

KITCHEN APPLIANCES

Energy Star Rating: Provide Equipment Eligible for Energy Star Rating where available and applicable.
Refrigerator: Free-standing, side-by-side, and frost-free.
Capacity: Total minimum storage of 17.0 cubic ft; minimum 25 percent freezer capacity.
Energy Usage: Energy Star Rated.
Features: Include glass shelves, automatic icemaker, light in freezer compartment, and ADA compliant front-mounted controls.
Exterior Finish: Porcelain enameled steel, color as selected by Owner.
Manufacturers:
To be selected by Owner.
Microwave: Countertop.
Capacity: 1.3 cubic ft.
Power: 1000 watts.
Height: 12 inches maximum.
Features: Include turntable.
Exterior Finish: Painted steel, color as selected by Owner.
Manufacturers:
To be selected by Owner.
Convection Oven, : Countertop.
Size: 12 inch.
Features: pre-programmed cooking fuctions, broil, interior light, non-stick coated racks, and timer.
Exterior Finish: Painted steel, color black.
Manufacturers:

DIVISION 12 - FURNISHINGS

SECTION 12 21 13 - HORIZONTAL LOUVER BLINDS

MANUFACTURERS

Horizontal Louver Blinds:
CACO Inc.: www.cacoinc.com
SWFcontract, a division of Spring Window Fashions, LLC.: www.swfcontract.com.
Ball Blinds.
Grabler Blinds

BLINDS

Description: Horizontal slat louvers hung from full-width headrail with full-width bottom rail.
Provide 1 inch 'Mini-Blind' horizontal louver blinds at all Maintenance Building windows.
Manual Operation: Control of raising and lowering by counterbalance spring with full range locking; blade angle adjustable by control wand.
Plastic Slats: Extruded PVC, square slat corners.
Width: 1 inch.
Thickness: 0.017 inch.
Texture: Smooth.
Slat Support: Woven polypropylene cord, ladder configuration.
Head Rail: Pre-finished, formed steel box, with end caps; internally fitted with hardware, pulleys, and bearings for operation; same depth as width of slats.
Bottom Rail: Pre-finished, formed steel ; with end caps.
Color: Same as headrail.
Lift Cord: Braided nylon, continuous loop with restraining device; comply with WCMA A100.1.
Control Wand: Extruded solid plastic; hexagonal shape.

SECTION 12 35 30 - RESIDENTIAL CABINETS AND COUNTERTOPS

CABINETS

Manufacturers:
All Wood Cabinetry Inc.; "All Wood": www.allwoodfast.com
American Traditions/S&W Cabinets, Inc: Shaker Poplar: www.swcabinets.com
Wellborn Cabinet, Inc: Home Concepts - All Plywood: www.wellborn.com#sle.
Wolf Home Products; Wolf Classic Cabinets: www.wolfhomeproducts.com#sle.
Cabinet Box: Framed construction.
Cabinet Door/Drawer Configuration: Partial overlay.
Cabinet Doors:
3/4 inch kiln-dried hardwood frame; mortise and tenon construction, 1/4 inch plywood center panel with hardwood veneer finish.
Drawers:
1/2 inch Birch plywood full box with butted joints, 1/4 inch Birch plywood bottom.
Shelves: 5/8 inch plywood.
Exposed shelf edges: Finish with manufacturer's standard edge banding, color coordinated with other exposed finishes.
Cabinet Hardware: As selected from manufacturer's standard types, styles and finishes.
Drawer and Cabinet Pulls: Satin nickel, wire pulls 4 inches wide
Exterior Finish: Factory-applied urethane; 2 color coats with top coat min.
Color: To be selected by Owner from manufacturer's standard line.

COUNTERTOPS

Kitchen Countertops: Post formed plastic laminate over particle board with, rolled edge, and coved to back splash.
Colors/Patterns: To be selected by Owner from manufacturer's standard line.

Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

MANUFACTURERS

Paints:
Behr Paint Company: www.behr.com.
Benjamin Moore Paints: www.benjaminmoore.com.
PPG Paints: www.ppgpaints.com.
Sherwin-Williams Company: www.sherwin-williams.com.

PAINTS AND FINISHES - GENERAL

Volatile Organic Compound (VOC) Content:
Provide paints and finishes that comply with the most stringent requirements specified in the following:
40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
SCAQMD 1113 Rule.
Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings: www.otcair.org, specifically:
Opaque, Flat: 50 g/L, maximum.
Opaque, Nonflat: 150 g/L, maximum.
Opaque, High Gloss: 250 g/L, maximum.
Architectural coatings VOC limits of the State of Missouri.
Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site, or other method acceptable to authorities having jurisdiction.
Colors: To be selected from manufacturer's full range of available colors.

PAINT SYSTEMS - INTERIOR

Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, wood, uncoated steel, and shop primed steel.
Top Coat(s): Interior Latex.
Primer: As recommended by top coat manufacturer for specific substrate.
Paint I-OP-MD-TD - Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals and wood:
Top Coat(s): Interior Alkyd, Water Based.
Primer: As recommended by top coat manufacturer for specific substrate.

PRIMERS

Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
Interior Latex Primer Sealer.
Latex Primer for Interior Wood.

DIVISION 10 - SPECIALTIES

SECTION 10 14 00 - SIGNAGE

SIGNAGE APPLICATIONS

Accessibility Compliance: Signs are required to comply with, UFAS, ADA Standards, and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
Room and Door Signs: Provide signs as indicated in Signage Schedule.
Sign Type: Flat signs with raised panel media as specified.
Interior Directional and Informational Signs:
Sign Type: Same as room and door signs.
Building Identification Signs:
Sign Type: Dimensional Letters and Numbers, 4 inch high minimum; wall-mounted.
Material: plastic letters & numbers.
Install at building exteriors as directed by Owner
Dwelling Unit Identification Signs:
Sign Type: Flat signs with raised panel media as specified.
Material: Fiberglass or Photopolymer signs.
Mounting: Countersunk Screws.
Office Directional Sign:
Sign Type: Flat signs with printed panel media as specified.
Material: Fiberglass or Photopolymer signs.
Size: 24 inch by 36 inch.
Mounting: Pole- mounted.
Text: 'OFFICE' with directional arrow (direction of arrow per Owner)
Monument Sign: Provide sign as indicated on Drawings.
Traffic Signs: Provide Parking/Traffic signs and mounting poles of types indicated on drawings.

SIGN TYPES

Flat Signs: Signage media without frame.
Color and Font: Unless otherwise indicated:
Character Font: Helvetica, Arial, or other sans serif font.
Character Case: Upper case only.
Background Color: Selected by Owner/Architect.
Character Color: Contrasting color.

TACTILE SIGNAGE MEDIA

Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
Injection Molded Panels: One-piece acrylic plastic, with raised letters and braille.
Applied Character Panels: Acrylic plastic base, with applied acrylic plastic letters and braille.

DIMENSIONAL LETTERS

Plastic Letters:
Material: Injection molded plastic.

SECTION 10 28 00 - TOILET AND BATH ACCESSORIES

MANUFACTURERS

Fixture and Accessory Manufacturers:.
Better Homes Products, Inc.: www.betterhomesproducts.com.
Pfister, a Spectrum Brands Company: www.pfisterfaucets.com.
Delta Faucet Company, Inc.: www.deltafaucet.com.

Color: To be selected by Owner from manufacturer's full range.

ACCESSORIES

Subfloor Filler: Fast-setting, portland-cement based; type recommended by adhesive material manufacturer.
Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
Moldings, Transition and Edge Strips: Same material as flooring.
Sound Control Underlayment: Recycled rubber type.
Manufacturers:
Pileq, Inc; GenieMat RST: www.pileq.com.
Roll Thickness: 3/8 inch, nominal.

SECTION 09 91 13 - EXTERIOR PAINTING

SECTION INCLUDES

Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
Factory-primed Entry doors.
Exposed surfaces of steel lintels and ledge angles.
Galvanized roof flashings and drip edges.
Steel Bollards.
Mechanical and Electrical:
Exposed pipe and conduit.

Do Not Paint or Finish the Following Items:
Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
Items indicated to receive other finishes.
Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
Stainless steel, anodized aluminum, bronze, terne-coated stainless steel, zinc, and lead.
Floors, unless specifically indicated.
Brick, glass unit masonry, architectural concrete, cast stone, integrally colored plaster and stucco.
Glass.

DELIVERY, STORAGE, AND HANDLING

Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

FIELD CONDITIONS

Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.
Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

MANUFACTURERS

Paints:
Behr Paint Company: www.behr.com.
Benjamin Moore Paints: www.benjaminmoore.com.
PPG Paints: www.ppgpaints.com.
Sherwin-Williams Company: www.sherwin-williams.com.

PAINTS AND FINISHES - GENERAL

Volatile Organic Compound (VOC) Content:
Provide paints and finishes that comply with the most stringent requirements specified in the following:

40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings: www.otcair.org, specifically:
Opaque, Flat: 50 g/L, maximum.
Opaque, Nonflat: 150 g/L, maximum.
Opaque, High Gloss: 250 g/L, maximum.
Architectural coatings VOC limits of the State of Missouri.
Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site, or other method acceptable to authorities having jurisdiction.
Colors: To be selected from manufacturer's full range of available colors.

PAINT SYSTEMS - EXTERIOR

Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete masonry units, engineered wood siding, primed wood, primed metal, and primed urethane decorative elements.
Top Coat(s): Exterior Latex.
Paint ME-OP-3A - Ferrous Metals, Unprimed, Alkyd, 3 Coat:
Paint ME-OP-2A - Ferrous Metals, Primed, Alkyd, Water Based, 2 Coat:
Paint MgE-OP-3A - Galvanized Metals, Alkyd, 3 Coat:

PRIMERS

Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
Interior/Exterior Latex Block Filler.
Rust-Inhibitive Water Based Primer; MPI #107.
Latex Primer for Exterior Wood; MPI #6.

SECTION 09 91 23 - INTERIOR PAINTING

SECTION INCLUDES

Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
Both sides and all edges of interior wood doors.
Mechanical and Electrical:
Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.

Do Not Paint or Finish the Following Items:
Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
Items indicated to receive other finishes.
Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
Floors, unless specifically indicated.
Ceramic and other tiles.
Glass.
Concealed pipes, ducts, and conduits.

DELIVERY, STORAGE, AND HANDLING

Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

FIELD CONDITIONS

Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

Alura Village Garage Building Type "E"

Lee's Summit, Jackson County, Missouri

GENERAL NOTES

ELEVATION DATUM
SEE ARCHITECTURAL DRAWINGS OR SITE PLAN FOR FINISH FLOOR ELEVATIONS

DESIGN SPECIFICATIONS
2018 INTERNATIONAL BUILDING CODE

EARTHWORK
EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL TESTING AGENCY TO ASSURE COMPLIANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT PREPARED BY OLSSON, INC. DATED AUGUST 22, 2019.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:

FOUNDATIONS	3,000 PSI
CAST-IN-PLACE WALLS	3,500 PSI
FLOOR SLAB	4,000 PSI
EXTERIOR SLABS, WALLS AND CURBS	4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION.
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C-143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
 - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
 - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

CAST AGAINST AND EXPOSED TO EARTH.....	3 INCHES
EXPOSED TO EARTH OR WEATHER.....	2 INCHES
NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH.....	1 1/2 INCHES
 - C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
 - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
 - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.

TIMBER

TIMBER WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION WITH 2018 NDS SUPPLEMENT FOR WOOD CONSTRUCTION, WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

1. FOR COMMON MEMBER SIZES, THE SPECIES AND GRADES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

A.	2X4	SPF No.1/No.2
B.	2X6	SPF No.1/No.2
C.	2X8	DF-L No.2
D.	2X10	DF-L S.S.
E.	2X12	DF-L S.S.

EQUIVALENT (OR BETTER) GRADES & SPECIES MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

2. SIZES SHOWN FOR LUMBER ARE NOMINAL SIZES.
3. TIMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.
4. SPLICING OF JOISTS, STUDS, OR HEADERS IS PROHIBITED EXCEPT AS SHOWN.
5. BOLTS SHALL CONFORM TO ASTM A307. HOLES SHALL BE DRILLED PER SECTION 12.1.3 OF THE 2018 ANSI/AWC NDS FOR WOOD CONSTRUCTION NDS SUPPLEMENT.
6. LAG SCREWS AND WOOD SCREWS SHALL BE INSTALLED PER SECTIONS 12.1.4 & 12.1.5 RESPECTIVELY, OF THE 2018 ANSI/AWC NDS FOR WOOD CONSTRUCTION WITH 2018 NDS SUPPLEMENT.
7. COMMON NAILS SHALL BE USED, UNLESS NOTED OTHERWISE. IN ADDITION, NAILS SHALL BE GALVANIZED, IF EXPOSED TO WEATHER OR MOISTURE. TOE-NAILS SHALL BE DRIVEN PER SECTION 12.1.6.3 OF THE 2018 ANSI/AWC NDS FOR WOOD CONSTRUCTION WITH 2018 NDS SUPPLEMENT.
8. FASTENING SHALL BE PER THE IBC MINIMUM FASTENING SCHEDULE, TABLE 2304.10.1, UNLESS NOTED OTHERWISE.
9. CONNECTIONS/CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

POST-INSTALLED ANCHORS

1. ALL POST-INSTALLED ANCHORS SHALL MEET THE REQUIREMENTS OF THE CODE-CITED EDITION OF ACI 318, APPENDIX 17, AND SHALL BE ACCEPTABLE FOR BOTH CRACKED AND UNCRACKED CONCRETE.
2. EXPANSION ANCHORS HAVE BEEN DESIGNED AS HILTI KWIK BOLT TZ ANCHORS, UNLESS NOTED OTHERWISE.
3. ADHESIVE ANCHORS HAVE BEEN DESIGNED TO USE HILTI HIT HY 200 ADHESIVE IN CONCRETE OR SOLID MASONRY, UNLESS NOTED OTHERWISE.
4. EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL. SUBMITTALS ARE THE CONTRACTOR'S RESPONSIBILITY AND MUST INCLUDE ICC ES EVALUATION REPORTS FROM THE INTERNATIONAL CODE COUNCIL (ICC).
5. EMBEDMENT DEPTH IS DEFINED AS THE DISTANCE FROM THE SURFACE OF THE LOAD-BEARING BASE MATERIAL TO THE DEEPEST PART OF THE ANCHOR AFTER THE ANCHOR HAS BEEN DRIVEN INTO THE HOLE BUT NOT YET EXPANDED.
6. ADHESIVE ANCHORS SHALL BE ACCEPTABLE FOR LONG-TERM LOADING. WHEN BASE MATERIAL TEMPERATURES ARE BELOW 40 DEG F, ONLY NON-EPoxy-BASED ADHESIVES SHALL BE USED.
7. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLANE ANCHORS. CARE SHALL BE TAKEN TO AVOID CONFLICTS WITH EXISTING REINFORCING BARS. HOLES SHALL BE DRILLED AND CLEANED PER ANCHOR MANUFACTURER'S SPECIFICATIONS.
8. STAINLESS STEEL ANCHORS ARE REQUIRED AT ALL PERMANENTLY EXPOSED WEATHER CONDITIONS.

PREFABRICATED WOOD TRUSSES

1. FLOOR & ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE (TPI) DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES, AND THE ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
2. PROVIDE TEMPORARY AND PERMANENT BRACING ON ALL TRUSSES, AS REQUIRED TO PROVIDE MEMBER AND TRUSS STABILITY.
3. FLOOR & ROOF TRUSSES SHALL BE DESIGNED AND CONSTRUCTED FOR A MAXIMUM TOTAL LOAD DEFLECTION OF L/360 AND TO SAFELY SUPPORT THE FOLLOWING LOADS:
 - A. DEAD, LIVE, SNOW, WIND, EARTHQUAKE: SEE PROJECT DESIGN DATA ON COVER SHEET.
 - B. MECHANICAL PIPE LOAD: TRUSSES SHALL BE DESIGNED FOR A CONCENTRATED LOAD OF 250 LBS HUNG ANYWHERE ALONG THE BOTTOM CHORD.
 - C. OVER-FRAMING LOAD: TRUSSES SHALL ALSO BE DESIGNED TO SUPPORT ADDITIONAL OVERBUILD FRAMING, SUCH AS THAT WHICH FORMS VALLEYS AND HIPS ON ROOFS.
 - D. DRIFTED SNOW LOAD: TRUSSES SHALL BE DESIGNED TO SUPPORT DRIFTED SNOW LOADS IN ACCORDANCE WITH THE APPROPRIATE BUILDING CODE.
 - E. IN-PLANE LATERAL LOADS: TRUSSES SHALL BE DESIGNED TO SUPPORT ANY LATERAL LOADS CARRIED AXIALLY IN THE PLANE OF THE TRUSS, AS SHOWN ON THE PLANS.
4. GABLE END TRUSSES SHALL HAVE VERTICAL MEMBERS SPACED AT 16" O.C. MAXIMUM.
5. SUBMITTALS SHALL INCLUDE THE FOLLOWING:
 - A. SHOP DRAWINGS PREPARED UNDER THE SUPERVISION OF, AND SIGNED AND SEALED BY, A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS BUILT. THESE DRAWINGS SHALL INDICATE SPECIES, GRADE, AND SIZES OF LUMBER TO BE USED; PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE, SIZE, MATERIAL, FINISH, AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING DETAILS. SHOW TRUSS LAYOUT AND ALL REQUIRED TEMPORARY AND PERMANENT BRACING AFFECTING THE STRUCTURAL CAPACITY OF THE TRUSSES.

PROVIDE COMPLETE ENGINEERING DESIGN CALCULATIONS THAT INCLUDE DESIGN VALUES, DESIGN ANALYSIS INDICATING LOADING, ASSUMED ALLOWABLE STRESSES, STRESS DIAGRAM, AND CALCULATIONS, AND ANY OTHER INFORMATION NEEDED FOR REVIEW. THE CALCULATIONS SHALL HAVE BEEN SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER WHO IS REGISTERED IN THE STATE WHERE THE PROJECT IS BUILT AND WHO IS RESPONSIBLE FOR PREPARATION OF THE CALCULATIONS.

SPECIAL INSPECTIONS

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

- a. CONCRETE GROUT DESIGN MIX (PERIODIC)
- b. PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
- c. POST INSTALLED ANCHORS IN CONCRETE (CONTINUOUS)
- d. IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)
- e. WOOD FRAMING:
 - e.a. SHEAR WALLS; WALL SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
 - e.b. DIAPHRAGMS (FLOOR AND ROOF SHEATHING); SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
 - e.c. FRAMING MEMBERS AND DETAILS (PERIODIC)
 - e.d. MATERIAL GRADE (PERIODIC)
 - e.e. CONNECTIONS; HANGERS, HOLD DOWNS, BUILT-UP COLUMNS, BUILT-UP BEAMS (PERIODIC)
 - e.f. PRE-ENGINEERED TRUSSES; FRAMING, CONNECTIONS, BRIDGING (PERIODIC)

THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

DESIGN DATA

2018 INTERNATIONAL BUILDING CODE / ASCE 7-16

BUILDING OCCUPANCY CATEGORY	II
ROOF LOAD DATA	
LIVE LOAD	20
ASPHALT SHINGLES + FELT	40
5/8" OSB ROOF SHEATHING	2.5
PRE-ENGINEERED WOOD TRUSSES @ 2'-0" O.C.	40
INSULATION (BLOWN)	15
MECHANICAL ALLOWANCE	50
5/8" GYP. CEILING	3.0
SOLAR	50
TOTAL TO TRUSSES	45 lbs/sqft

RAIN LOADING DATA	
15 MINUTE RAIN INTENSITY	7.49 in/hr
60 MINUTE RAIN INTENSITY	3.52 in/hr

ROOF SNOW LOAD DATA: (*UNBALANCED & DRIFTING SNOW TO BE DETERMINED IN ADDITION TO UNIFORM LOAD, WHERE APPLICABLE)

$P_s =$	20 lbs/sqft
$C_s =$	10
$I_s =$	10
$C_t =$	10
$P_f =$	1400 lbs/sqft

WIND DESIGN DATA	
$V_{50} =$	109 MPH (3-SECOND GUST)
RISK CATEGORY	II
EXPOSURE	B
INTERNAL PRESSURE COEFFICIENT =	± 0.18
MAXIMUM COMPONENTS & CLADDING WIND	$\pm 7-24.97$ lbs/sqft

EARTHQUAKE DESIGN DATA	
RISK CATEGORY	II
$I_E =$	10
$S_S =$	0.1
$S_1 =$	0.068
SITE CLASS	C
$S_{MS} =$	0.086
$S_{M1} =$	0.068
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC-FORCE-RESISTING SYSTEM =	LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
$R =$	6.5
$\Omega_p =$	3.0
$C_d =$	4.0

DESIGN BASE SHEAR	$V = 0.018 W$
EQUIVALENT LATERAL FORCE PROCEDURE	

NET ALLOWABLE SOIL BEARING
(*PER GEOTECHNICAL REPORT BY OLSSON, INC. DATED AUGUST 22, 2019)

2,500 lbs/sqft**

INDEX OF SHEETS

COVER / GENERAL STRUCTURAL DATA	GS100
FOUNDATION PLAN	GS200
FOUNDATION DETAILS	GS210-GS211
ROOF FRAMING PLAN	GS300
ROOF FRAMING DETAILS	GS310

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY



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Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#200310301

CLIENT:
**INTRINSIC
DEVELOPMENT**
3632 ENDEAVOR AVE.
COLUMBIA, MISSOURI

Alura Village Garage Building Type "E"

Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

GENERAL
STRUCTURAL DATA

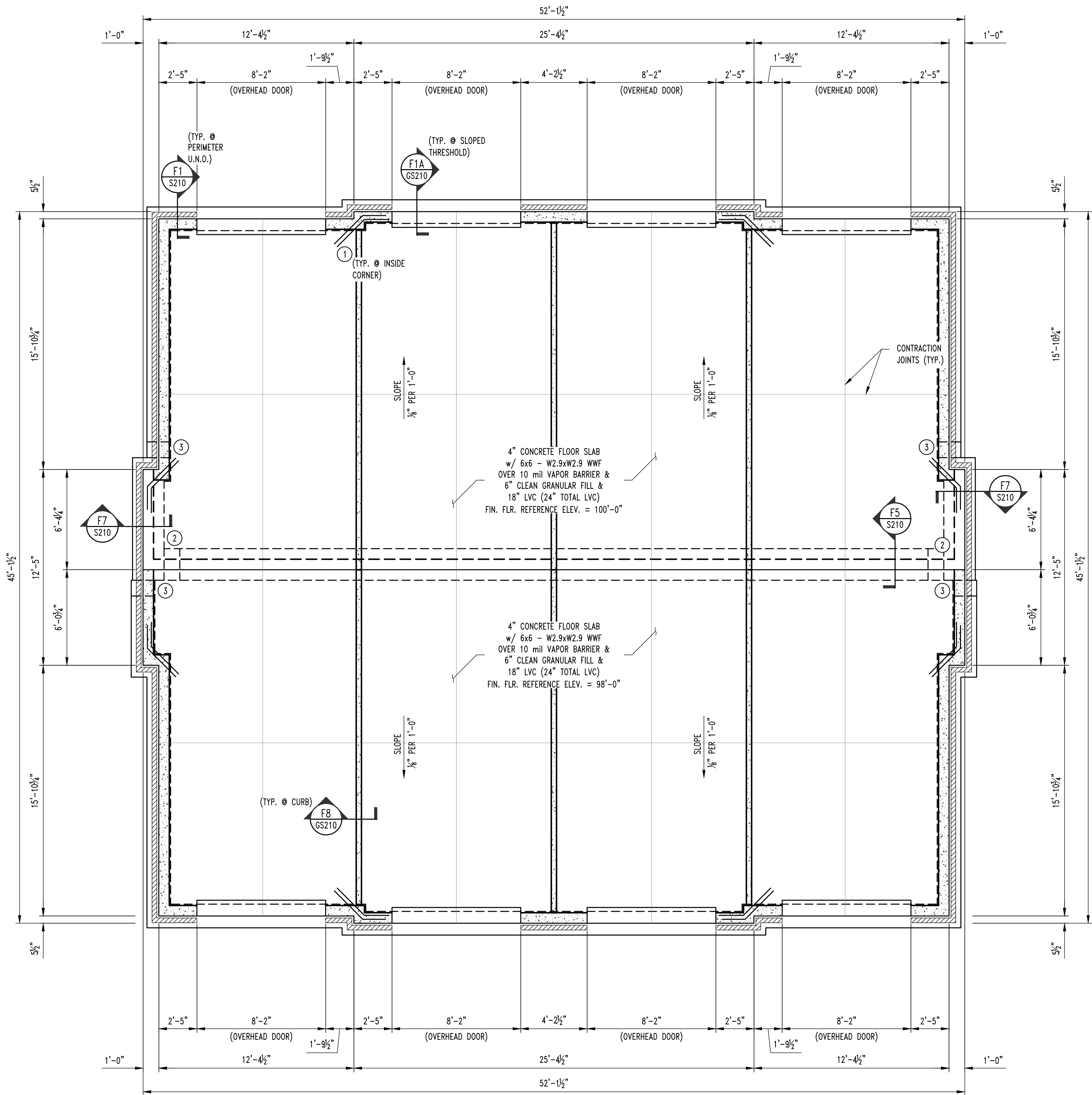
DESIGNED: JWV

DRAWN: SEH

PROJECT NO.: 230286

SHEET:
GS100

NOTE:
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.



1
GS200
GARAGE BUILDING TYPE "E" (BLDG. "G11") FOUNDATION PLAN
SCALE: 1/4" = 1'-0"
PLAN NORTH

FOUNDATION NOTES

- REINTRANT CORNER BARS, REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL ON SHEET GS210.
- FOOTING STEP, REFER TO DETAIL FS1/GS211.
- FOOTING STEP, REFER TO DETAIL FS2/GS211.
- FOOTING STEP, REFER TO DETAIL FS3/GS211.

REVISIONS:

No.	Date
ISSUE SET	04/15/2024

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
JARED W. VORLES
NUMBER
FE-2017090357
PROFESSIONAL ENGINEER
04/15/2025

STRUCTURAL ENGINEER:
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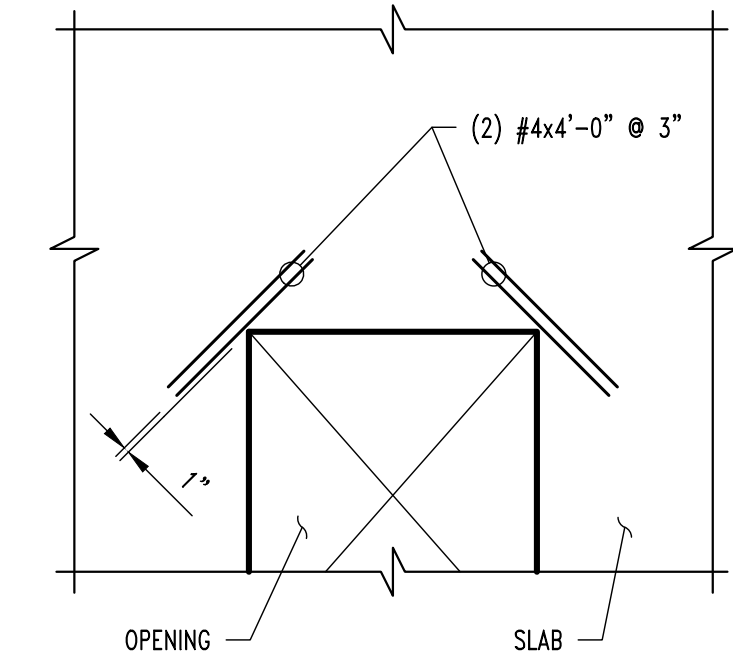
CLIENT:
**INTRINSIC
DEVELOPMENT**
3622 ENDAVOR AVE.
COLUMBIA, MISSOURI

Alura Village Garage Building Type "E"
Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

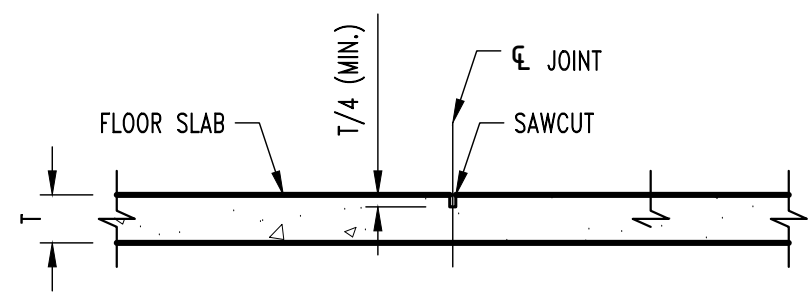
FOUNDATION
PLAN

DESIGNED: JWV
DRAWN: SEH
PROJECT NO.: 230286
SHEET: GS200

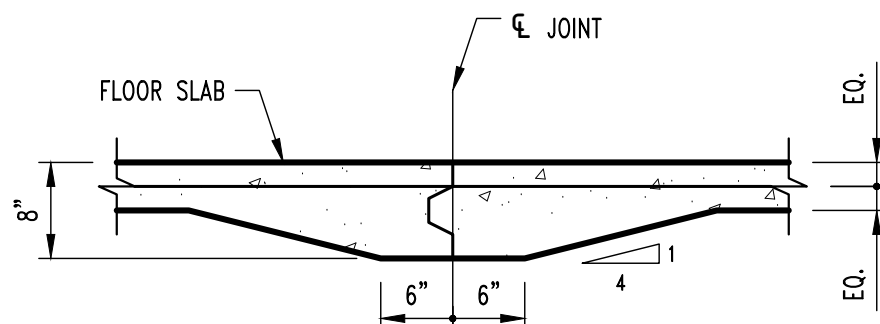


NOTE:
TYPICAL AT ALL REENTRANT CORNERS FOR
SLAB-ON-GRADE & STRUCTURAL SLAB.
REINFORCING TO BE CENTERED IN SLAB THICKNESS.

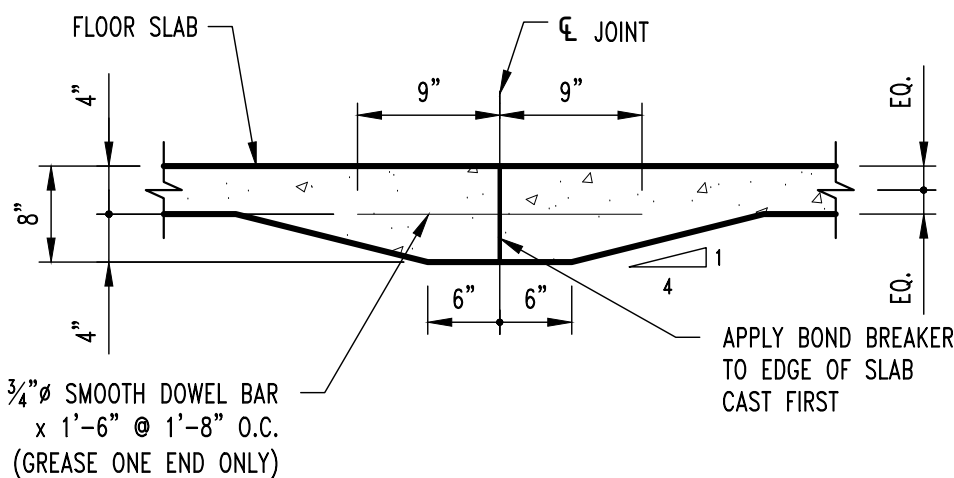
CRACK CONTROL REINFORCING



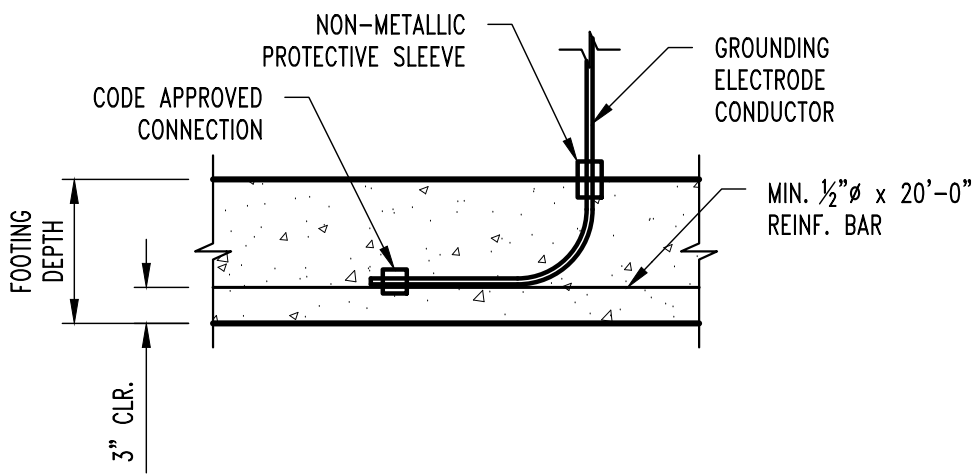
CONTRACTION JOINT



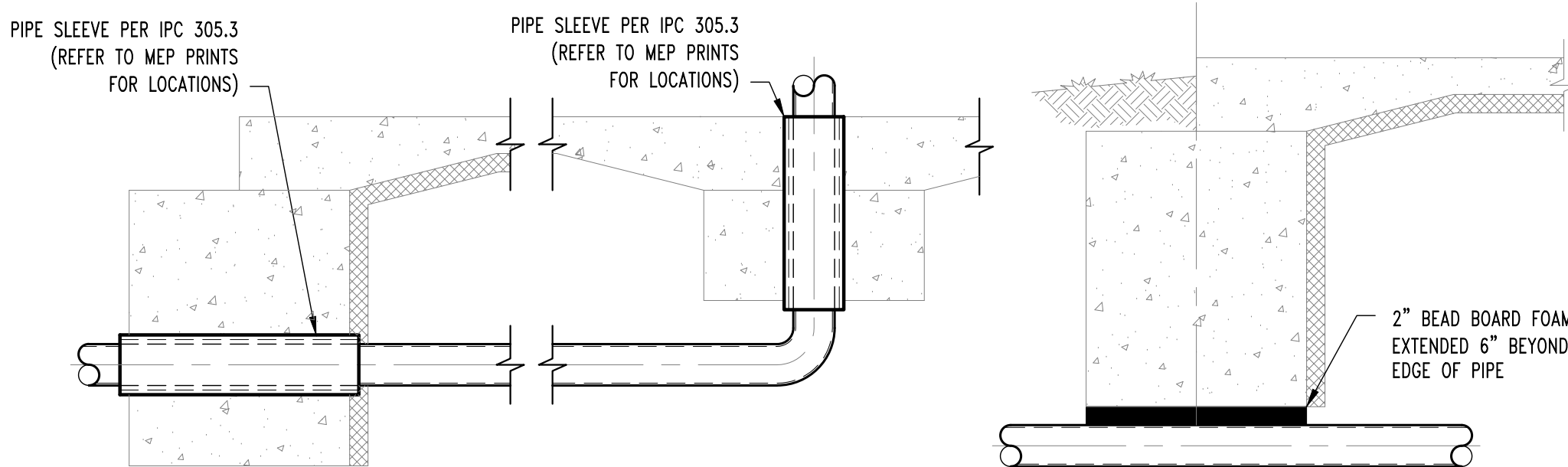
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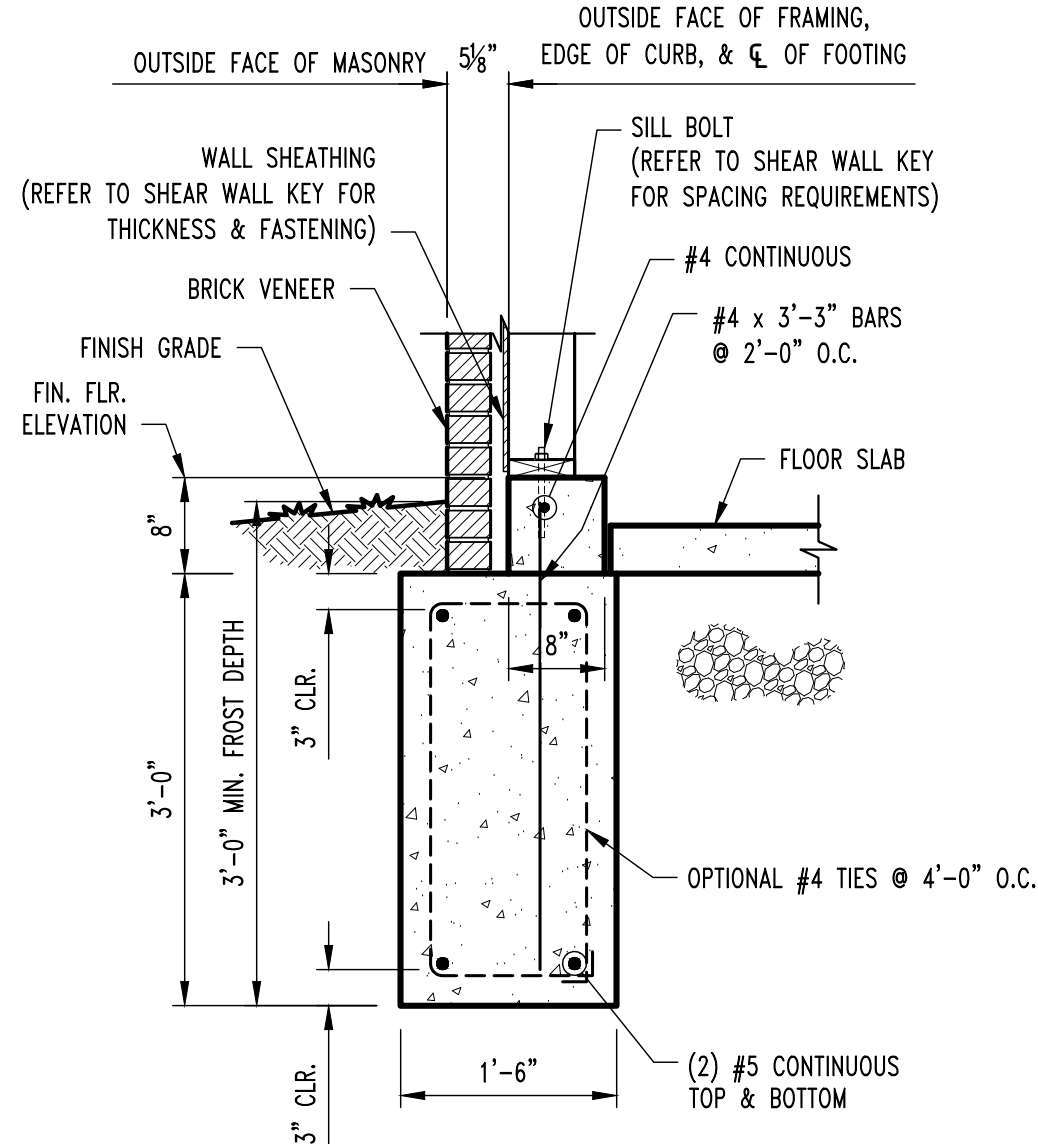
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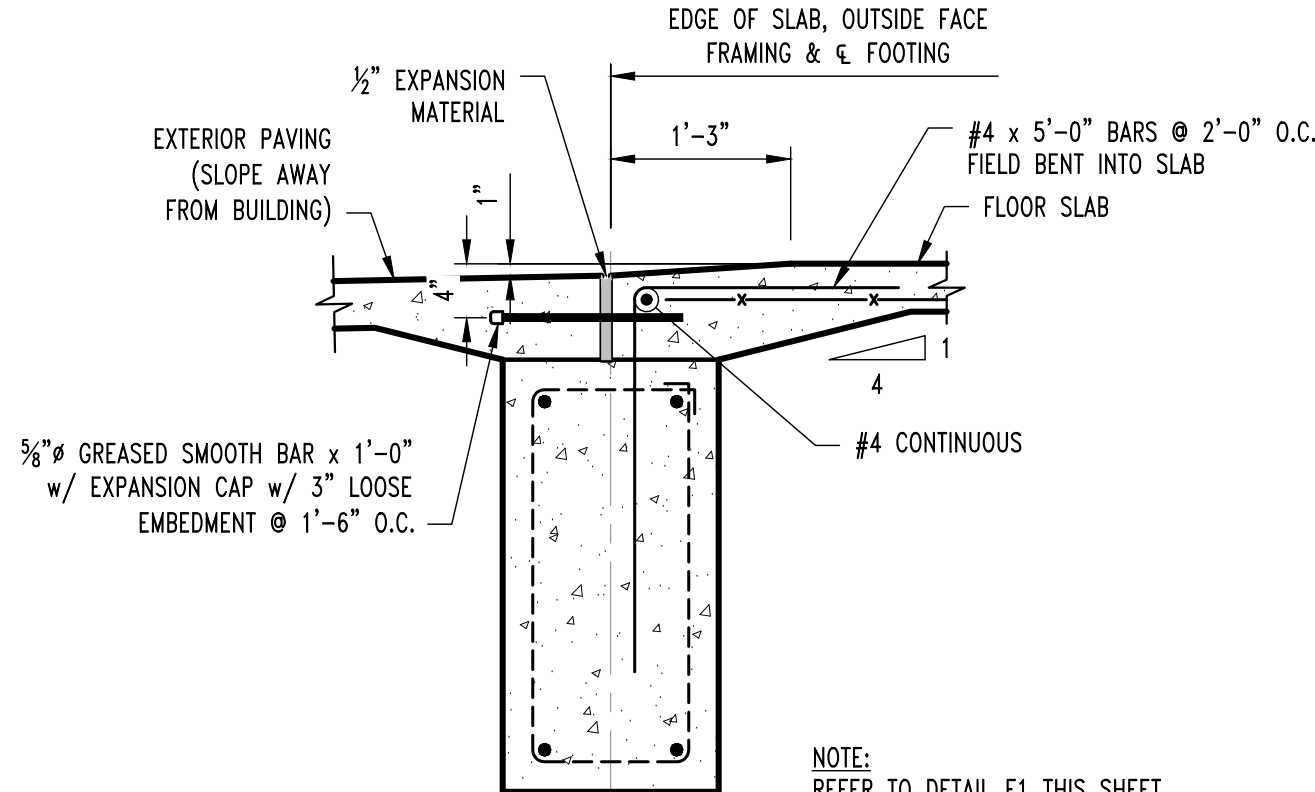
TYP. ELECTRICAL GROUNDING DETAIL @ FOOTING



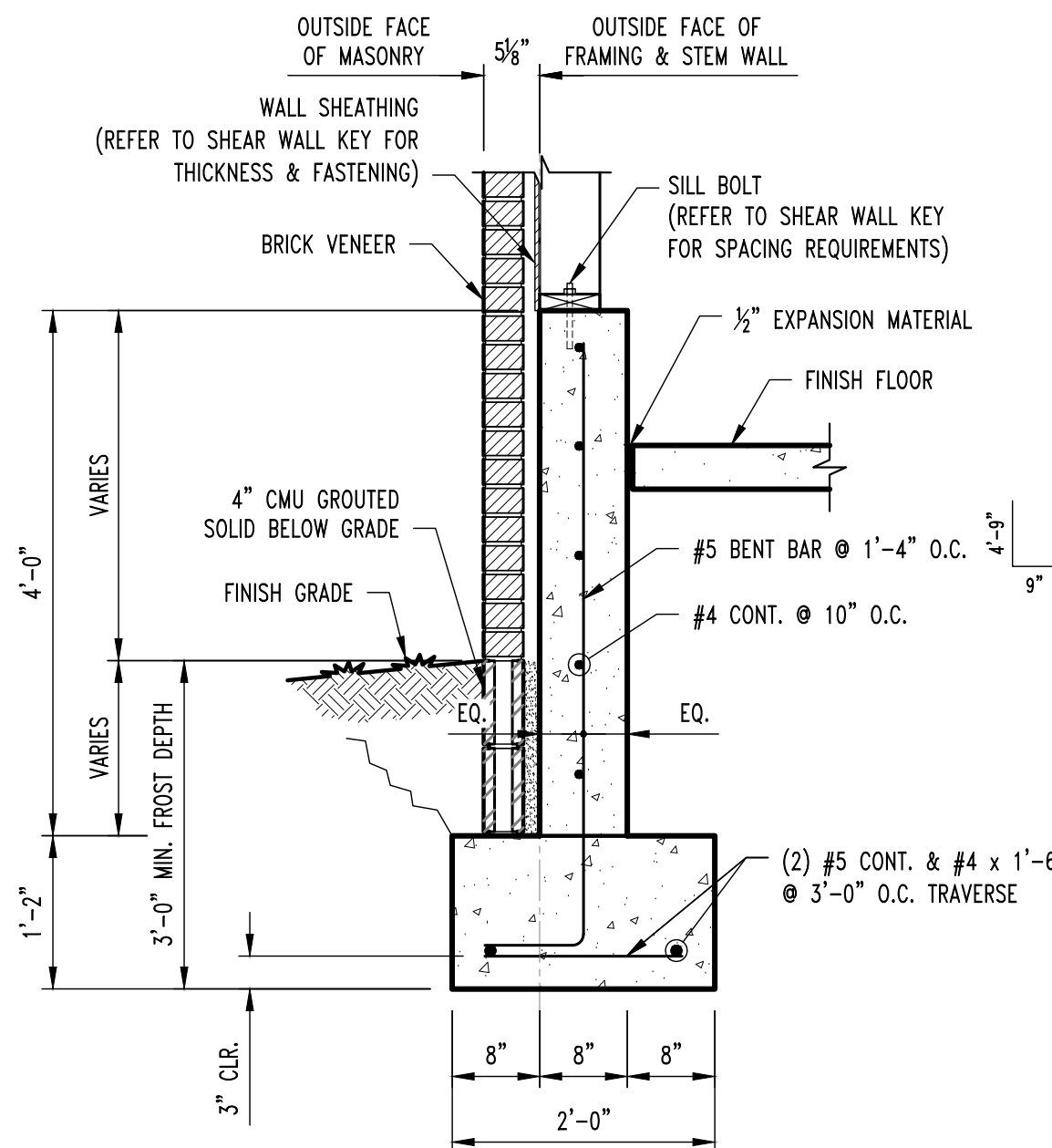
TYP. PLUMBING COORDINATION DETAILS



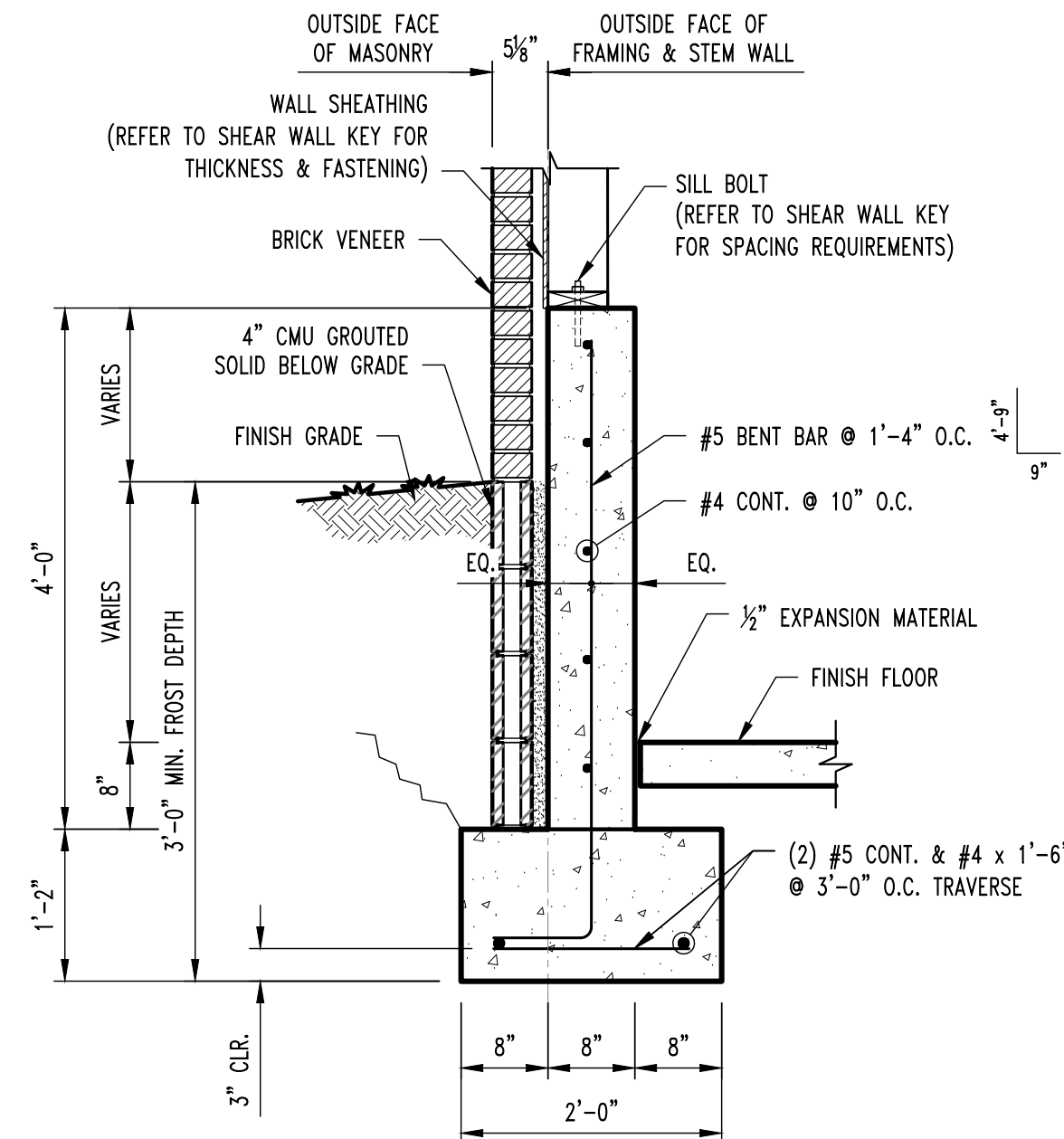
F1
GS200-GS200B
GARAGE CONT. FOOTING SECTION
SCALE: 3/4" = 1'-0"



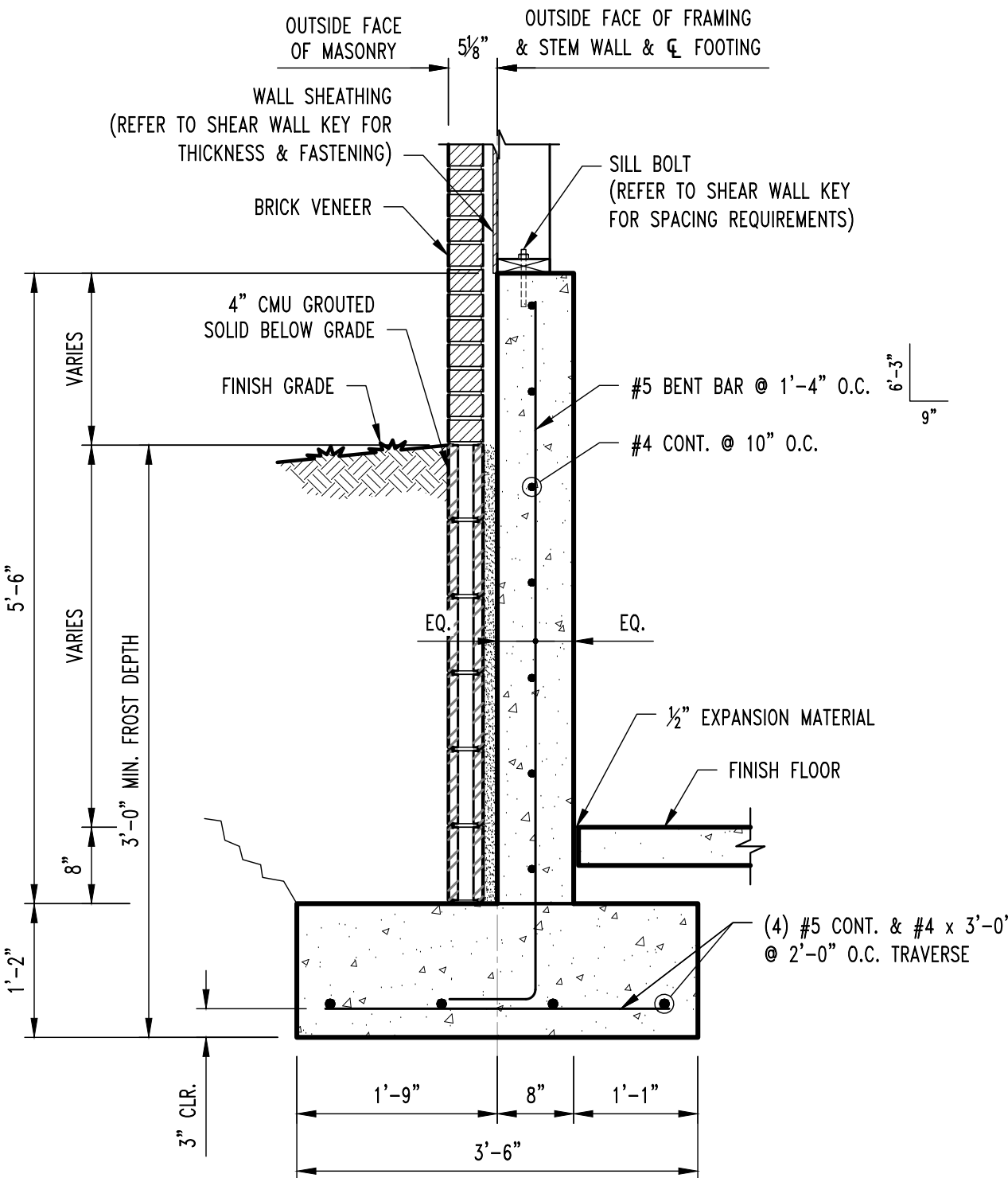
F1A
GS200-GS200B
SLOPED THRESHOLD SECTION @ OVHD DOOR
SCALE: 3/4" = 1'-0"



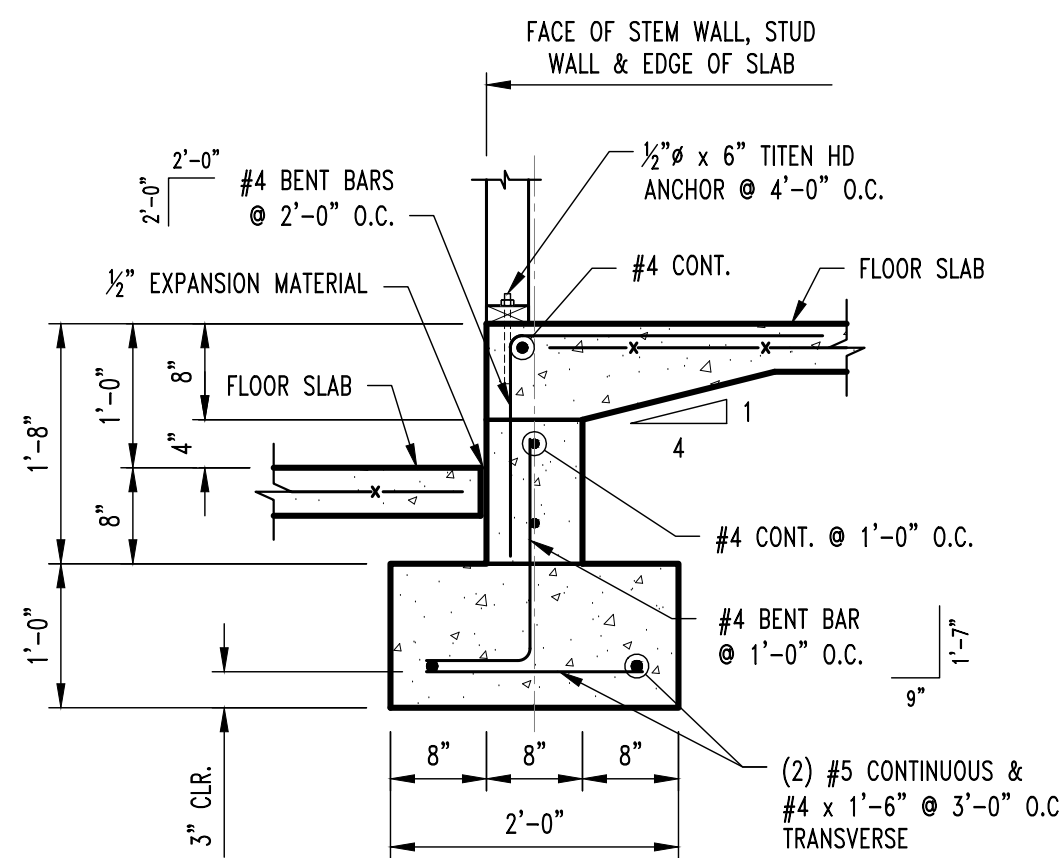
F2
GS200-GS200B
STEM WALL DETAIL
SCALE: 3/4" = 1'-0"



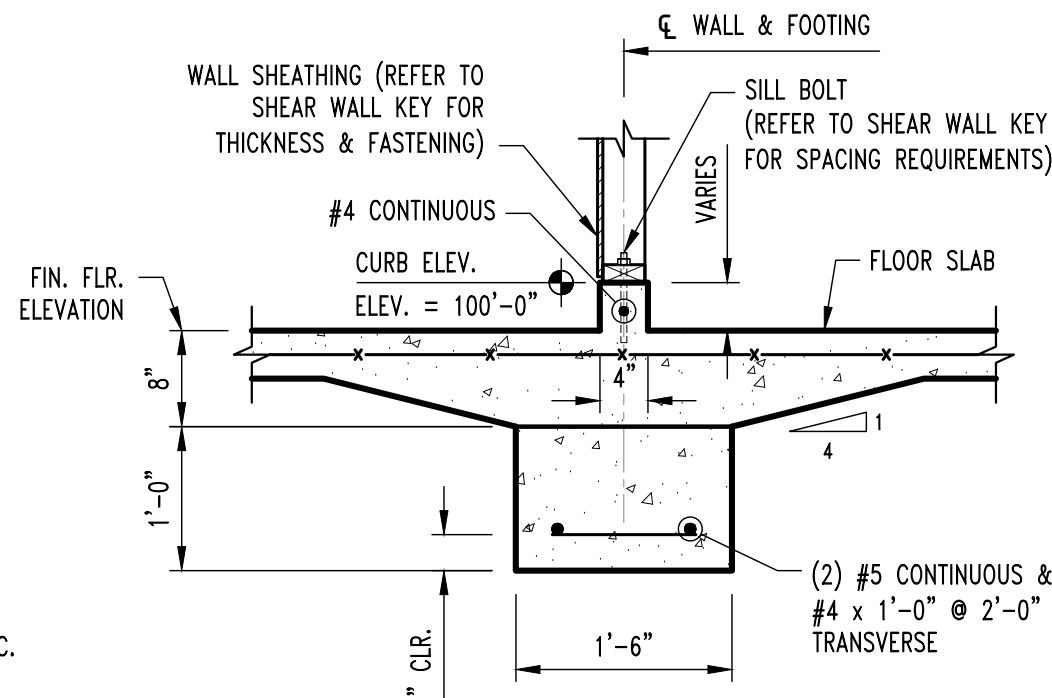
F3
GS200A
STEM WALL DETAIL
SCALE: 3/4" = 1'-0"



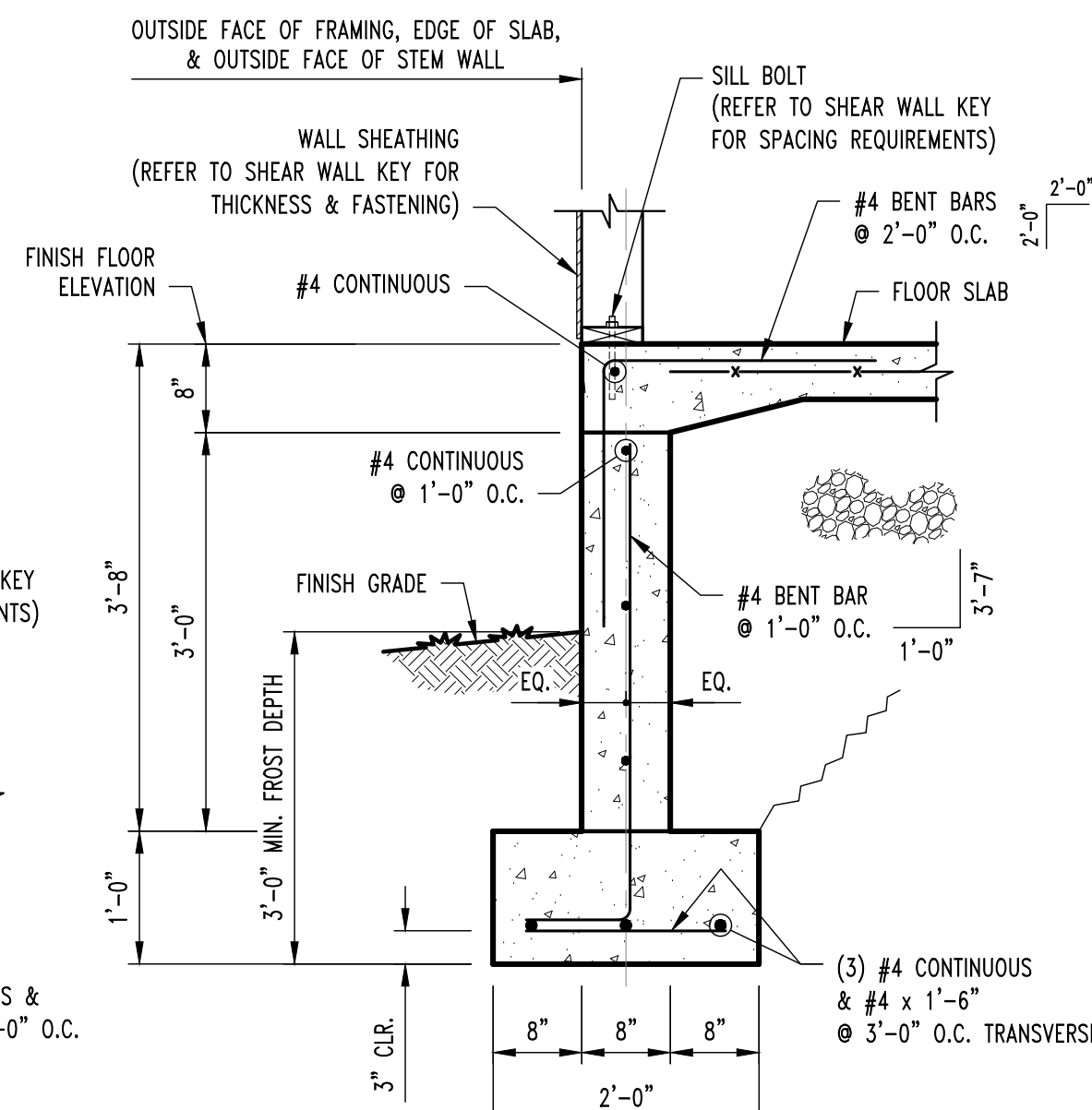
F4
GS200A
STEM WALL DETAIL
SCALE: 3/4" = 1'-0"



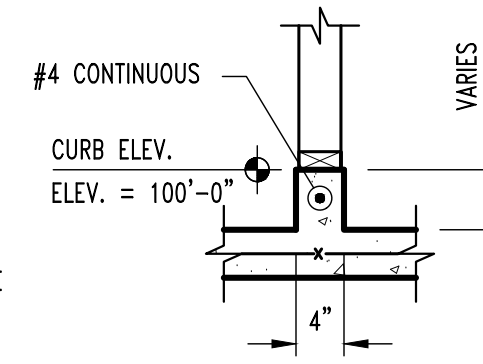
F5
GS200
CONTINUOUS FOOTING SECTION @ STEP
SCALE: 3/4" = 1'-0"



F6
GS200
CONT. INTERIOR FOOTING SECTION
SCALE: 3/4" = 1'-0"

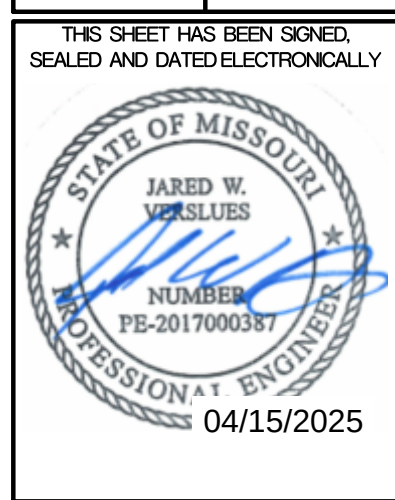


F7
GS200
STEM WALL SECTION
SCALE: 3/4" = 1'-0"



F8
GS200
TYP. GARAGE CURB SECTION
SCALE: 3/4" = 1'-0"

REVISIONS:	
No.	Date
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CLIENT:
**INTRINSIC
DEVELOPMENT**
3622 ENDEAVOR AVE.
COLUMBIA, MISSOURI

Aura Village Garage Building Type "E"
Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

FOUNDATION
DETAILS

DESIGNED: JWW
DRAWN: SEH
PROJECT NO.: 230286
SHEET: GS210

REVISIONS:

No.	Date
ISSUE SET	04/15/2024

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CLIENT:
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COLUMBIA, MISSOURI

Alura Village Garage Building Type "E"

Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

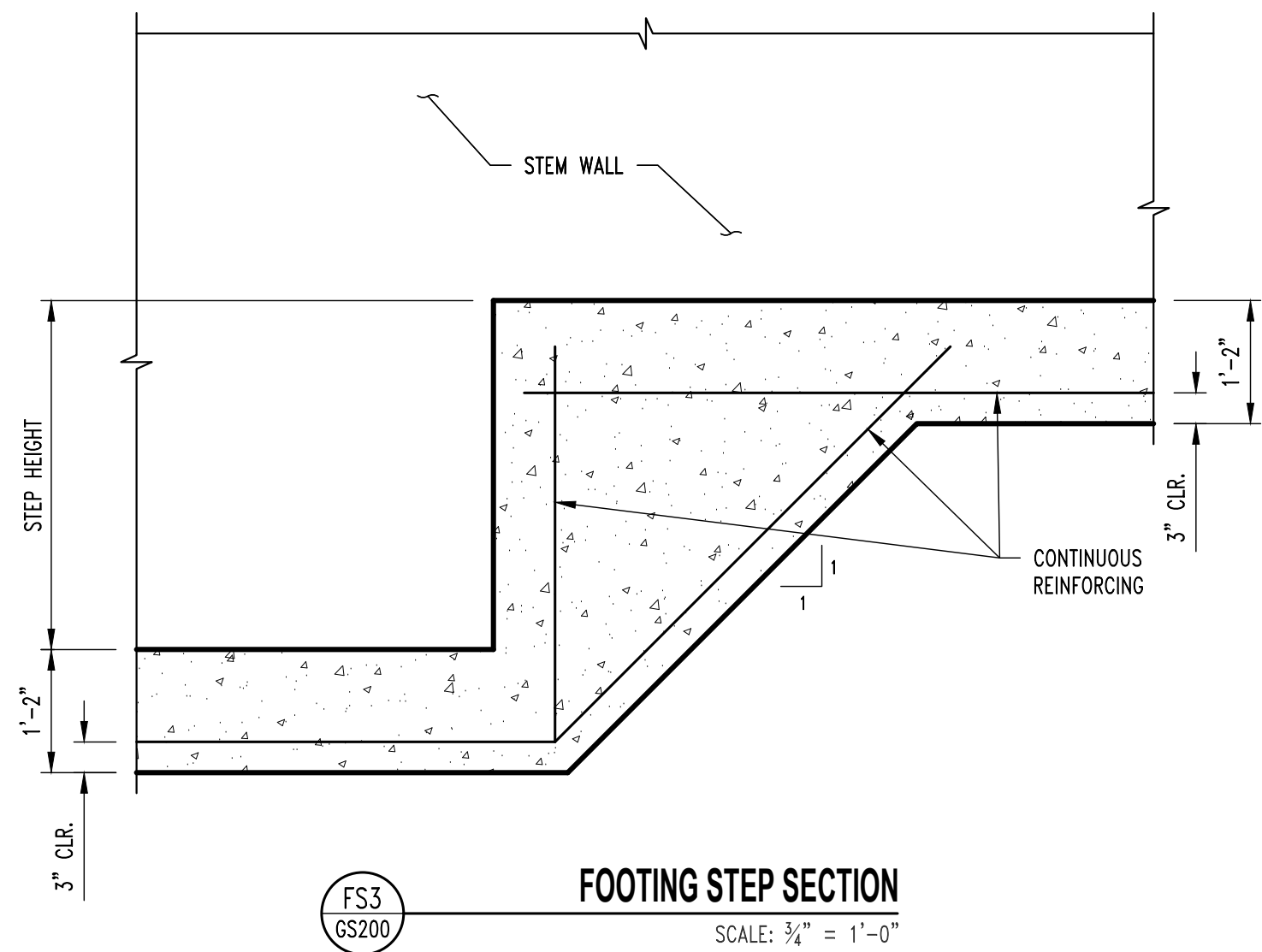
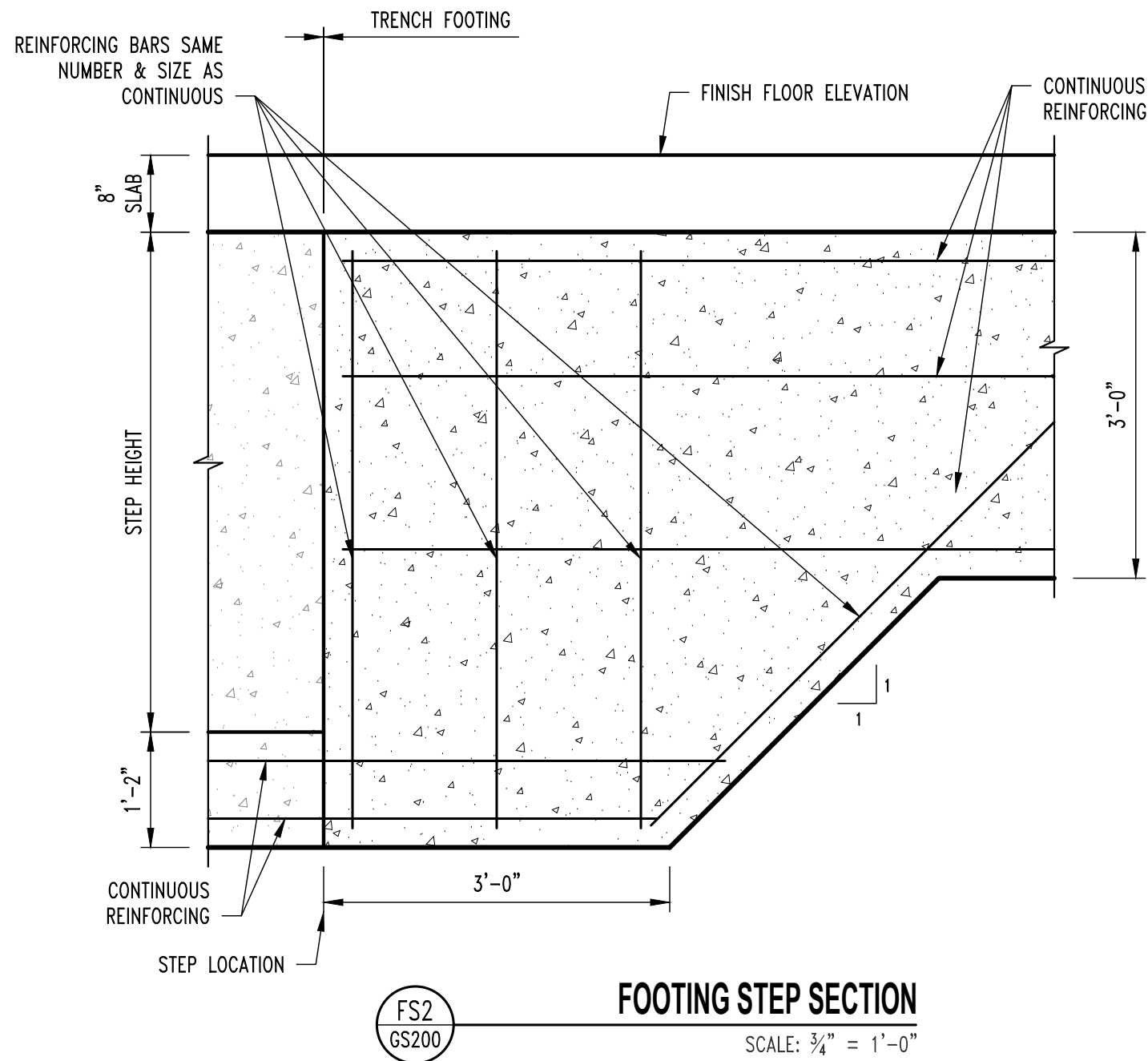
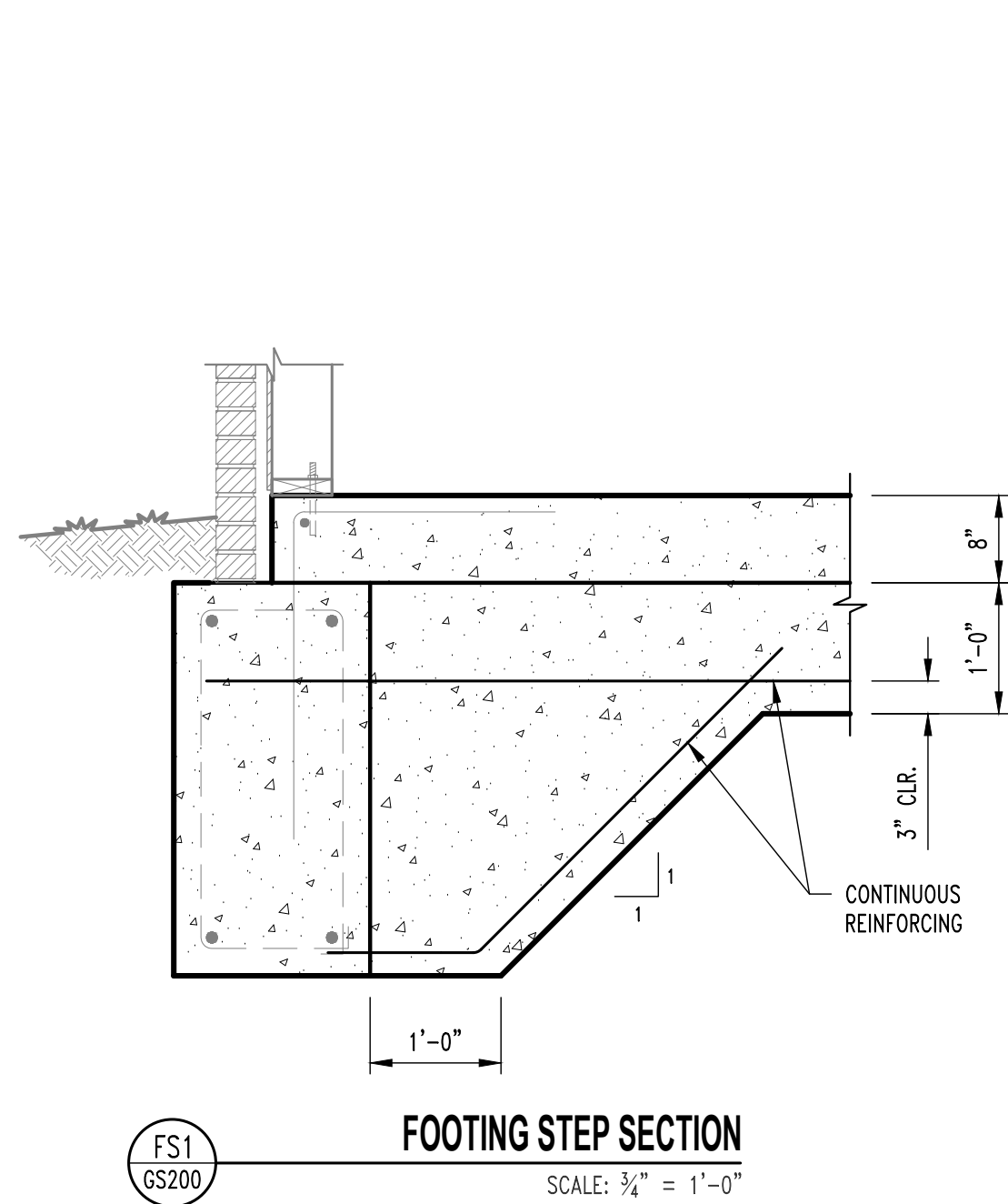
FOUNDATION
DETAILS

DESIGNED: JWV

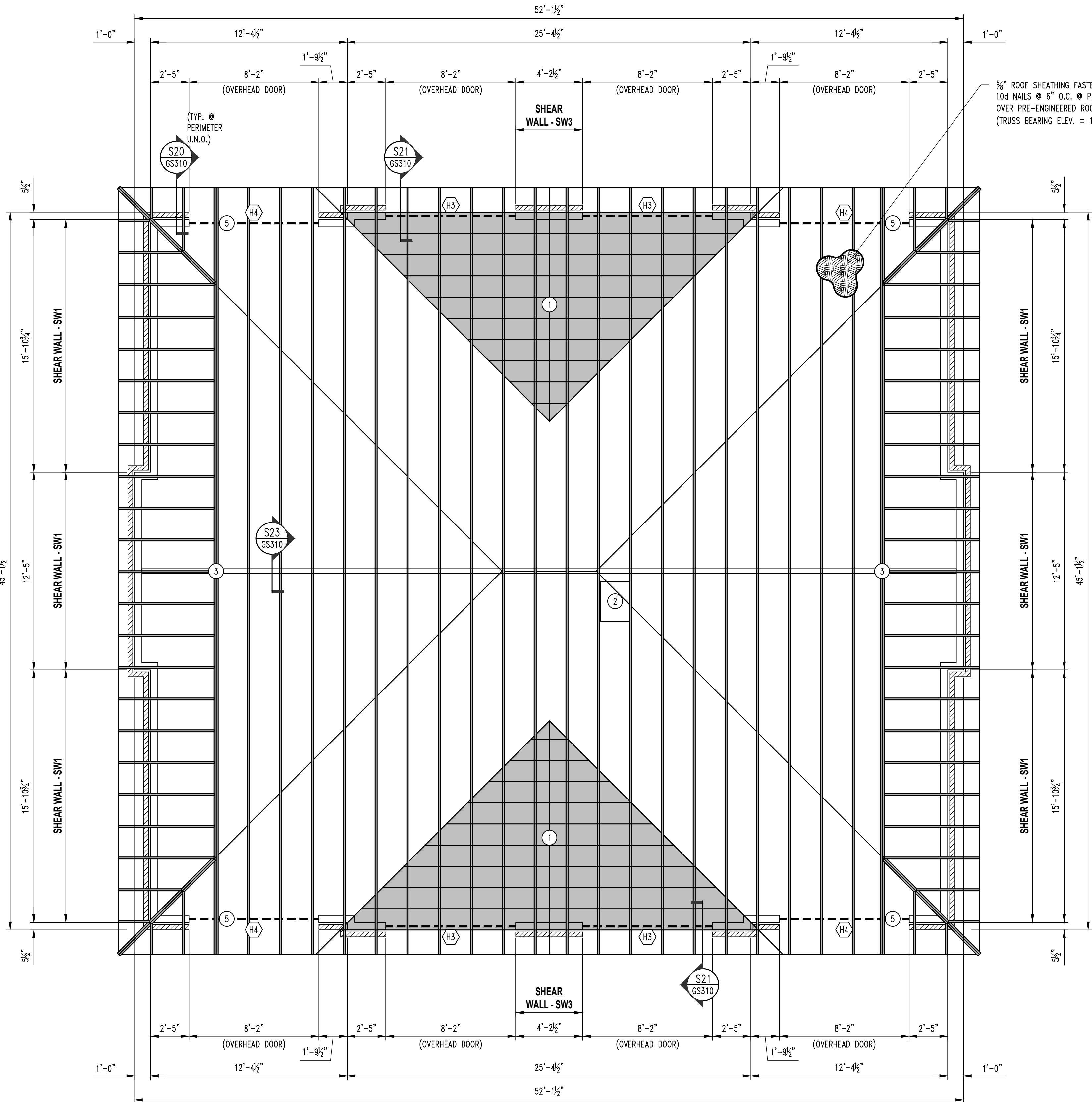
DRAWN: SEH

PROJECT NO.: 230286

SHEET:
GS211



NOTE:
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.



1
GS300

GARAGE BUILDING TYPE "E" ROOF FRAMING PLAN

SCALE: 3/4" = 1'-0"



BRICK LINTEL SCHEDULE	
LENGTH	MEMBER SIZE (GALVANIZED)
L ≤ 4'-0"	L4x4x3/8 WITH 6" BEARING EACH END
L ≤ 8'-6"	L6x4x3/8 (LLV) WITH 6" BEARING EACH END

HEADER SCHEDULE			
LABEL	HEADER	CRIPPLE/JACK	JAMMING
"H1"	2 Ply 2x8 Doug. Fir No.2	Single Ply 2x6 SPF No.1/No.2	Single Ply 2x6 SPF No.1/No.2
"H2"	2 Ply 2x10 Doug. Fir Sel. Struct.	2 Ply 2x6 SPF No.1/No.2	2 Ply 2x6 SPF No.1/No.2
"H3"	3 Ply 2x10 Doug. Fir Sel. Struct.	2 Ply 2x6 SPF No.1/No.2	2 Ply 2x6 SPF No.1/No.2
"H4"	3 Ply 2x12 Doug. Fir Sel. Struct.	2 Ply 2x6 SPF No.1/No.2	2 Ply 2x6 SPF No.1/No.2

SHEAR WALL KEY

- SW1 SHEAR WALL
FIRST FLOOR:
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
 - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 3'-0" O.C.
 - REQUIRES SIMPSON DTT2Z-SDS2.5 HOLDOWN FASTENED TO 2-PLY STUDS W/ (8) 3/4" X 13/8" SDS SCREWS W/ 1/2" DIAMETER A307 THREADED ROD W/ 16" TOTAL (8" INTO FOOTING) SIMPSON "AT-3G" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL

- SW2 SHEAR WALL
FIRST FLOOR:
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
 - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 2'-0" O.C.
 - REQUIRES SIMPSON WTA TENSION TIE FASTENED TO 2-PLY STUDS W/ (18) #10 X 13/8" SDS SCREWS W/ 5/8" DIAMETER A307 THREADED ROD W/ 16" TOTAL (8" INTO FOOTING) SIMPSON "AT-3G" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL

- SW3 SHEAR WALL
FIRST FLOOR:
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 2" O.C. @ PERIMETER / 12" O.C. FIELD (**NOTE:** THIS SHEET FASTENING PATTERN REQUIRES 3X OR DOUBLE 2X FRAMING MEMBERS WHERE SHEETS MEET)
 - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 1'-0" O.C.
 - REQUIRES SIMPSON HDU8-SDS2.5 HOLDOWN FASTENED TO 3-PLY STUDS W/ (20) X" X 2 3/4" SDS SCREWS W/ 7/8" DIAMETER A307 THREADED ROD W/ 20" TOTAL (12" INTO FOOTING) SIMPSON "AT-3G" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL

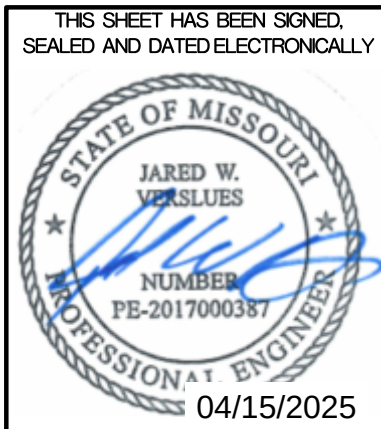
- TYPICAL SHEAR WALL UNLESS NOTED
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
 - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 3'-0" O.C.
 - NO HOLDOWNS REQUIRED

ROOF FRAMING NOTES

- FRAME ROOF OVER PRE-ENGINEERED TRUSSES TO CREATE RIDGE, VALLEY, OR HIP AS SHOWN w/ 2x SPF No.1/No.2 RAFTERS @ 16" O.C. OR PRE-ENGINEERED TRUSSES @ 2'-0" O.C. MAX. (SHADED AREA)
- ATTIC ACCESS; REFER TO ARCHITECTURALS FOR ADDITIONAL INFORMATION.
- GIRDER TRUSS
- 3-PLY BUILT-UP POST BENEATH GIRDER TRUSS THIS LEVEL TO FLOOR SLAB CONNECTIONS ARE AS FOLLOWS:
FLOOR SLAB: SIMPSON LITTP2.
ROOF TRUSS: BY TRUSS MANUFACTURER
- GIRDER TO HEADER CONNECTION. REFER TO TYPICAL DETAIL ON SHEET S310.
- REFER TO TYPICAL SHEAR WALL DETAIL ON SHEET S310.

REVISIONS:

No.	Date
ISSUE SET	04/15/2024



STRUCTURAL ENGINEER:
CROCKETT
ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Suite 1
Columbia, Missouri 65203
(573) 447-0992
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000181001

CLIENT:
INTRINSIC DEVELOPMENT
3622 ENDAVOR AVE.
COLUMBIA, MISSOURI

Alura Village Garage Building Type "E"
Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

ROOF
FRAMING PLAN

DESIGNED: JWV

DRAWN: SEH

PROJECT NO.: 230286

SHEET:
GS300

REVISIONS:	
No.	Date
ISSUE SET	04/15/2024

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.



STRUCTURAL ENGINEER
CROCKETT
ENGINEERING CONSULTANTS
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Missouri Certificate of Authority
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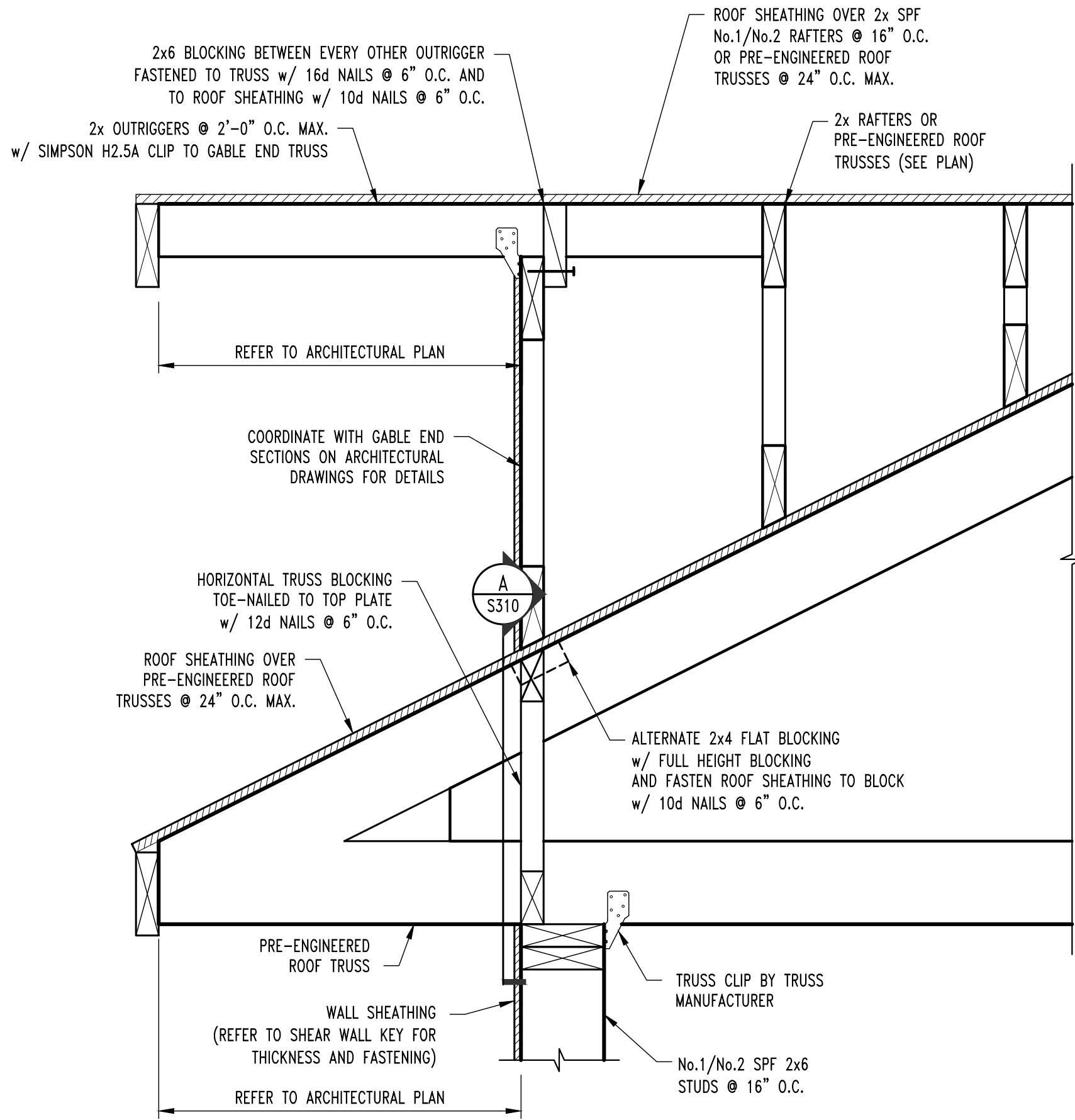
CLIENT:
**INTRINSIC
DEVELOPMENT**
3629 ENDAVOR AVE.
COLUMBIA, MISSOURI

Aura Village Garage Building Type "E"
Lee's Summit, Jackson County, Missouri

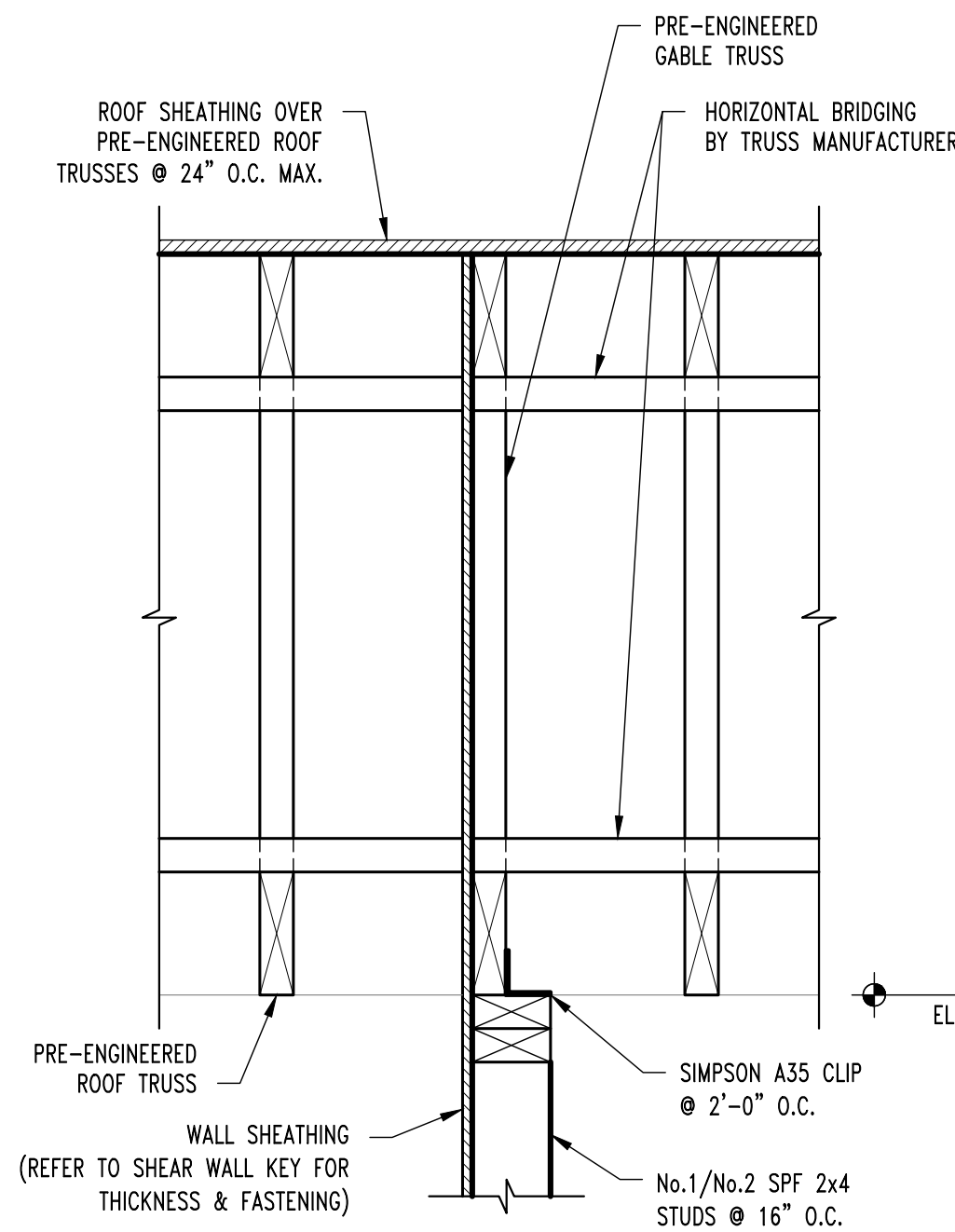
DRAWING INCLUDES:

ROOF FRAMING
DETAILS

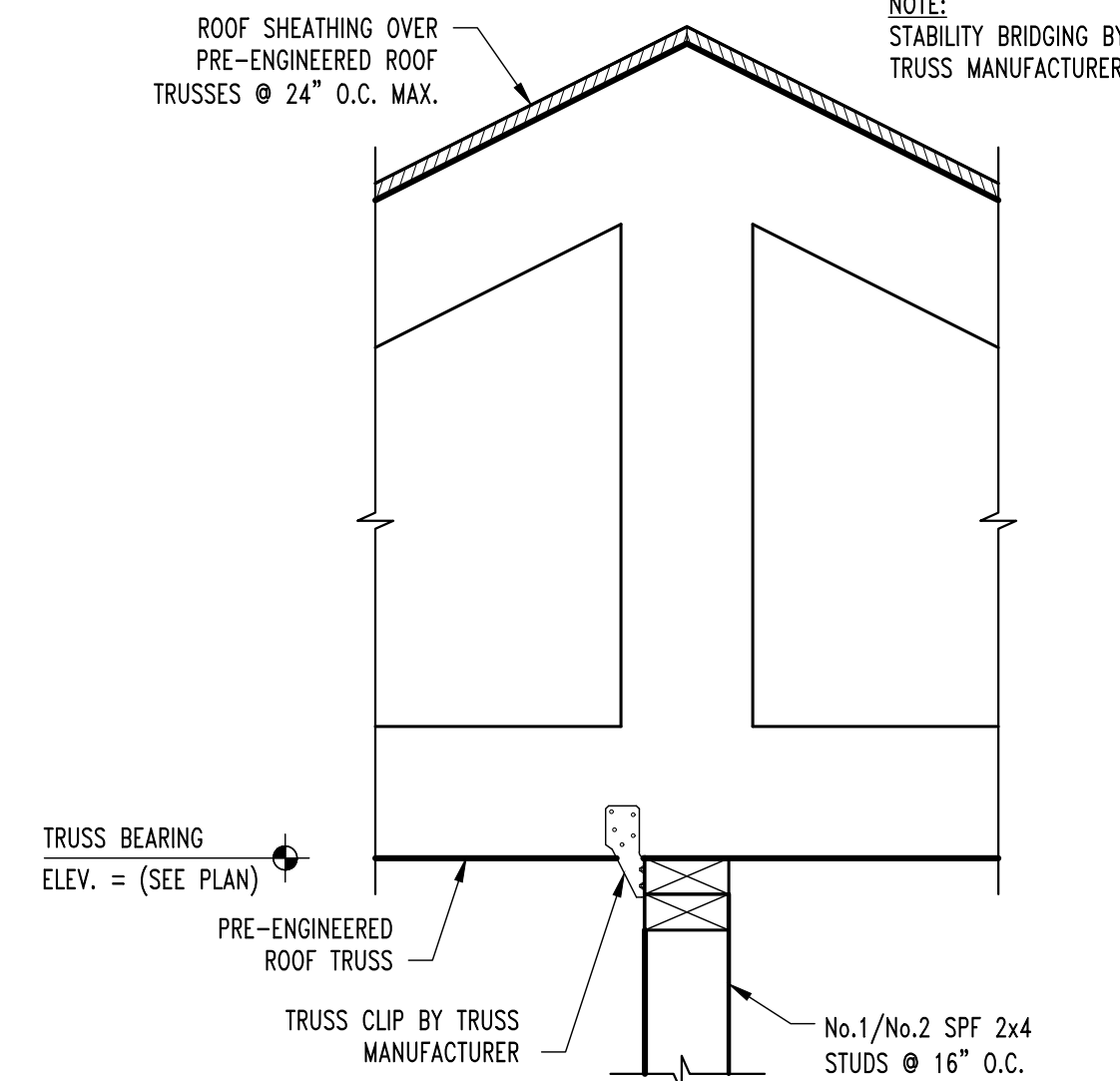
DESIGNED: JWW
DRAWN: SEH
PROJECT NO.: 230286
SHEET: GS310



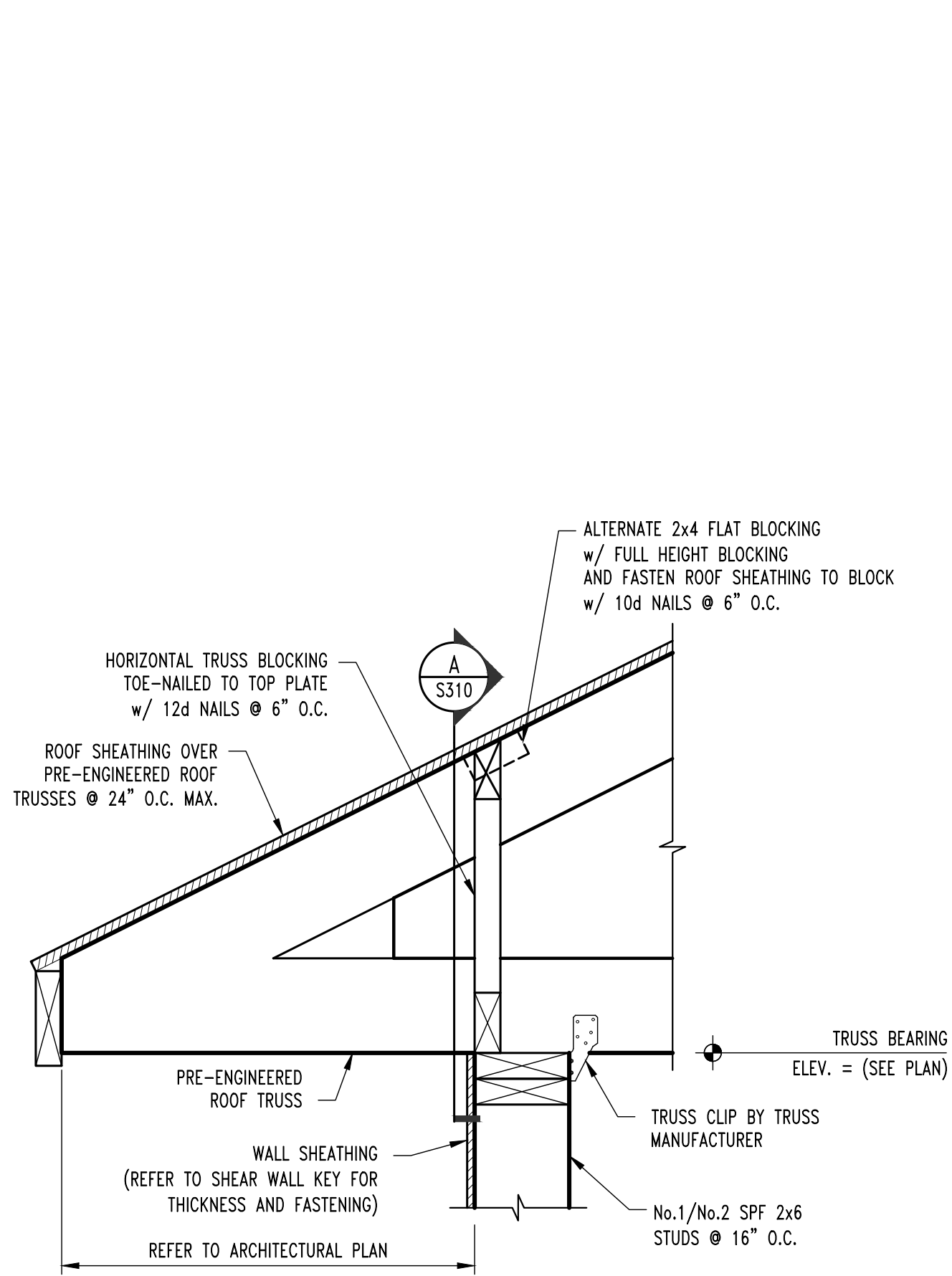
S21
GS300
TYP. ROOF FRAMING SECTION
SCALE: 1½" = 1'-0"



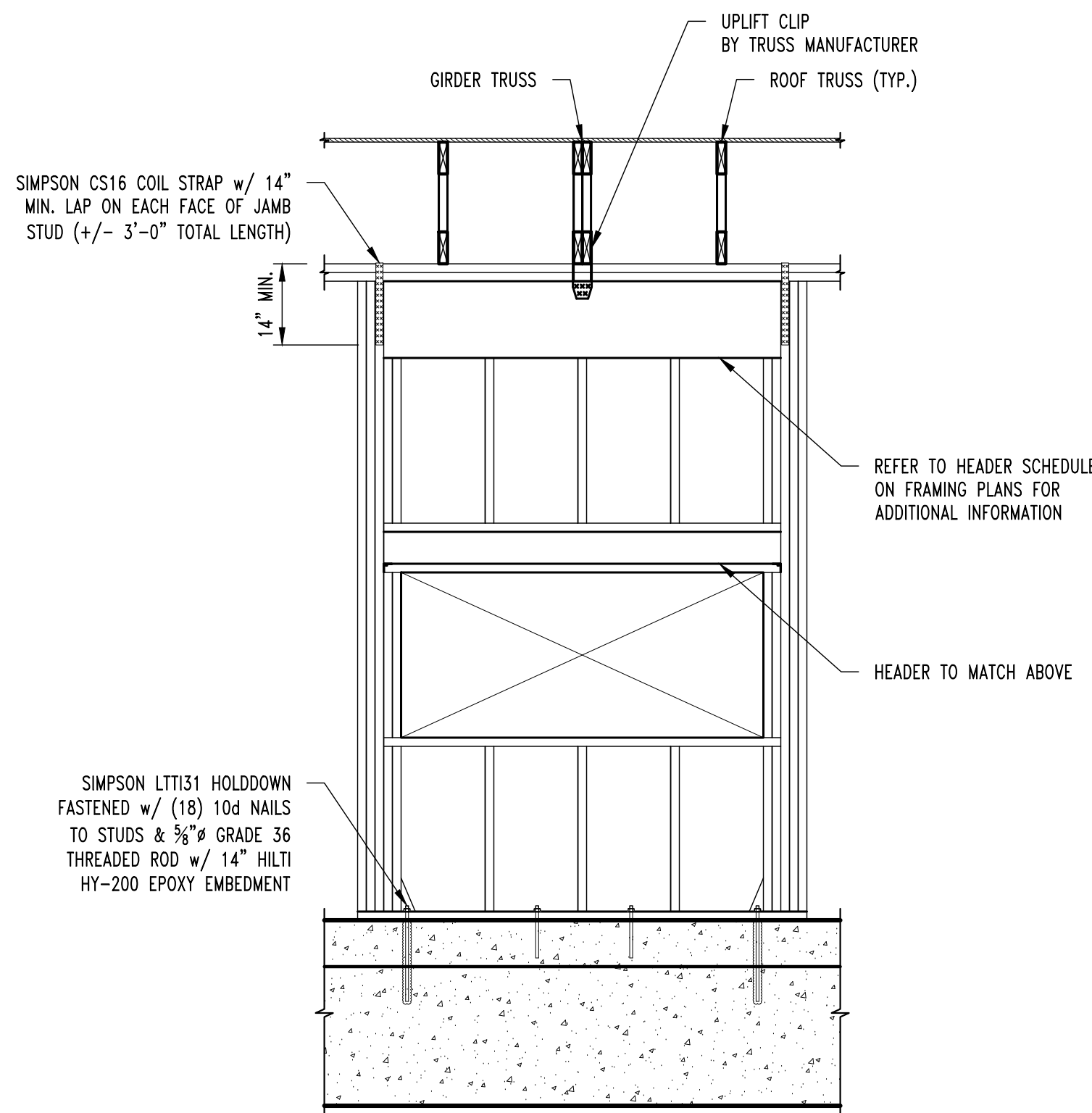
S22
GS300
ROOF FRAMING SECTION
SCALE: 1½" = 1'-0"



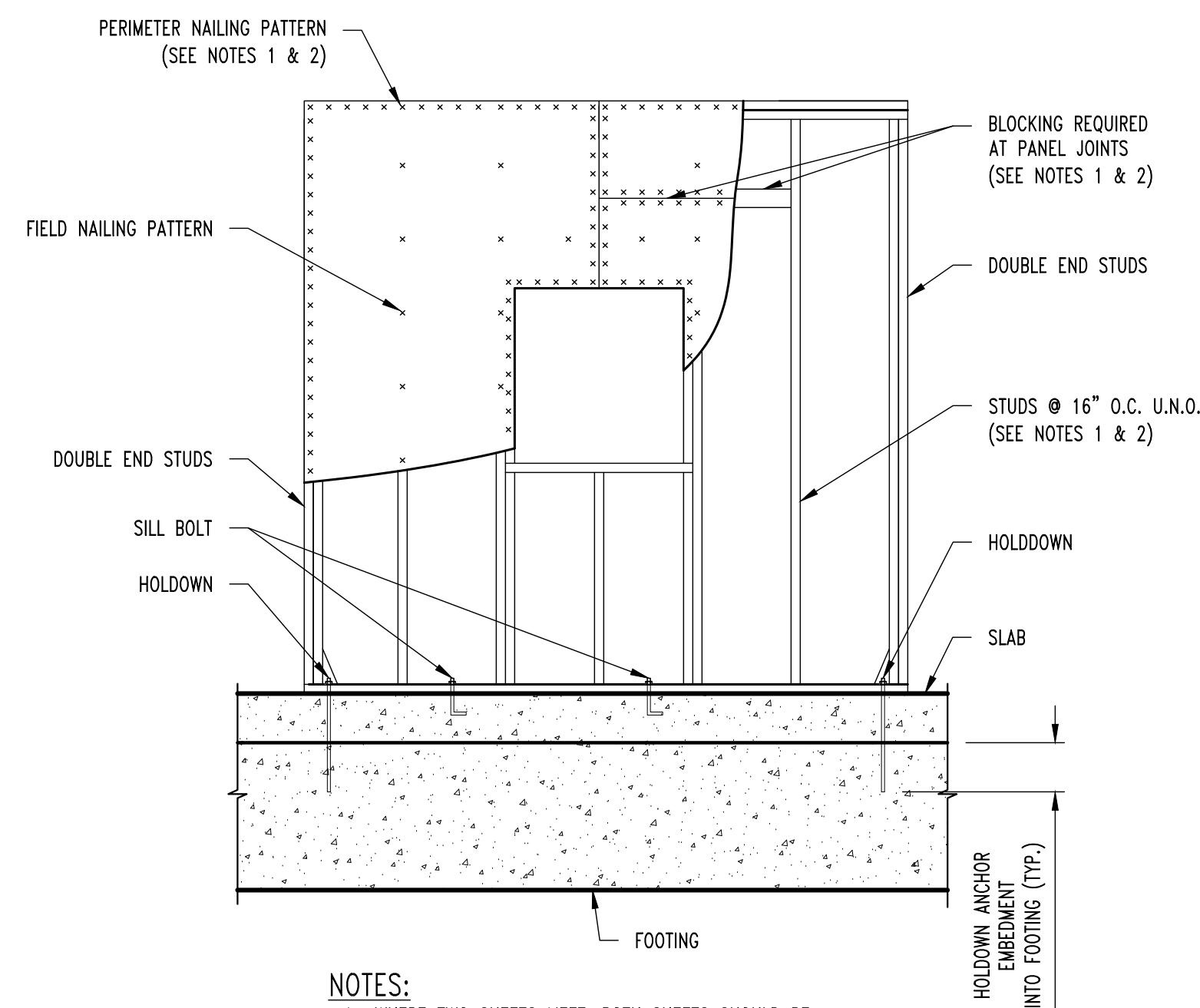
S23
GS300
ROOF FRAMING SECTION
SCALE: 1½" = 1'-0"



S20
GS300
TYP. ROOF FRAMING SECTION
SCALE: 1½" = 1'-0"

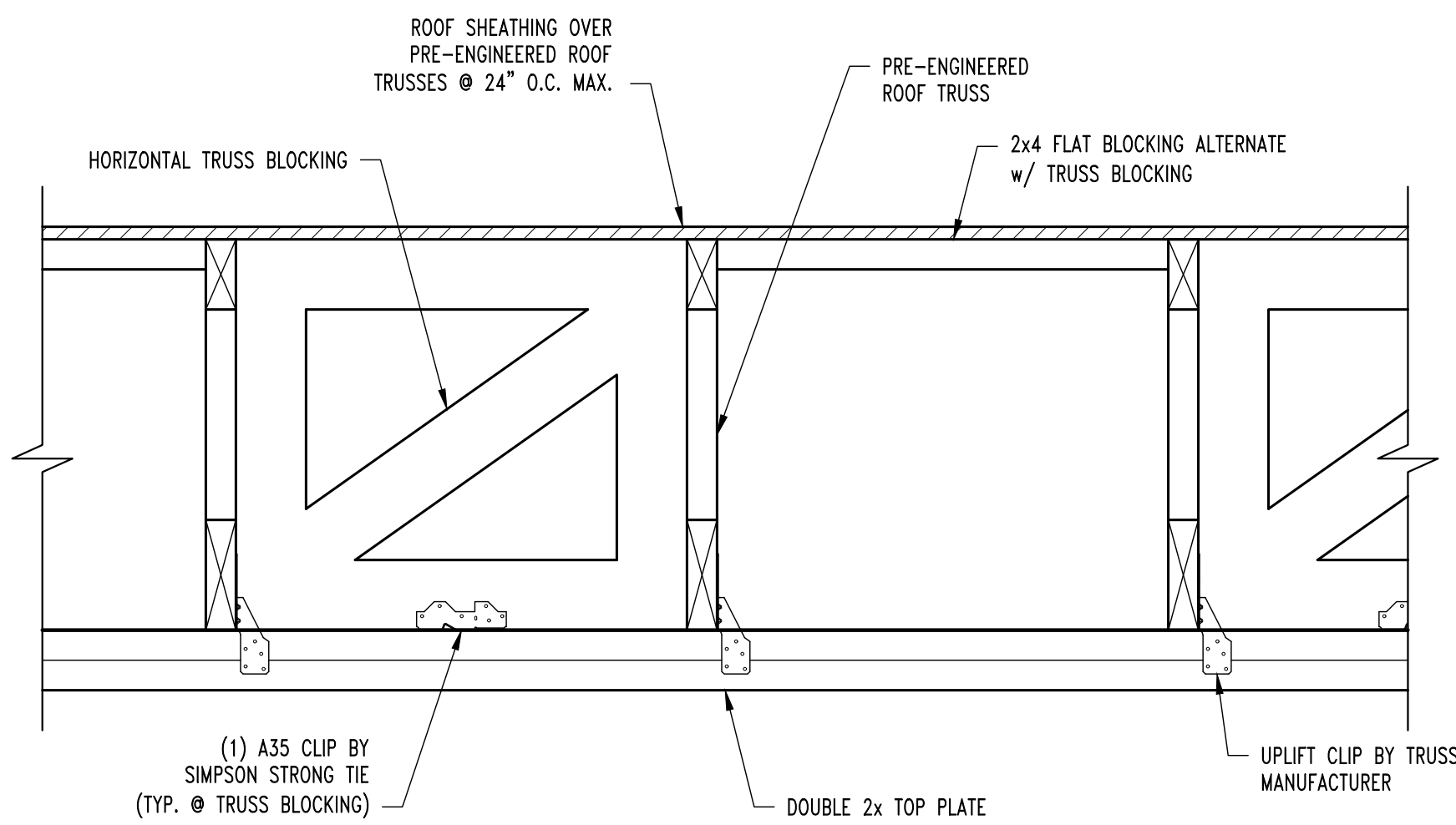


TYP. GIRDER TO HEADER DETAIL



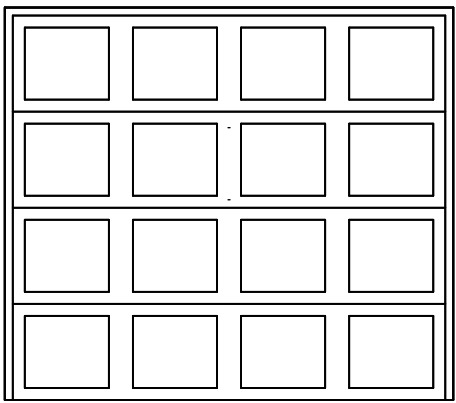
- NOTES:
- WHERE TWO SHEETS MEET, BOTH SHEETS SHOULD BE NAILED TO THE SAME FRAMING MEMBER.
 - WHEN SHEATHING NAILS ARE SPACED AT 2" O.C. FOR 8d NAILS OR 3" O.C. FOR 10d NAILS, 3x OR DOUBLE 2x FRAMING MEMBERS ARE REQUIRED WHERE SHEETS MEET. FACE NAIL DOUBLE 2x MEMBERS TOGETHER w/ 16d NAILS @ 2½" O.C. STAGGERED EACH FACE OF STUD.
 - SEE WALL SECTIONS FOR ADDITIONAL INFORMATION.

TYP. SHEAR WALL DETAIL



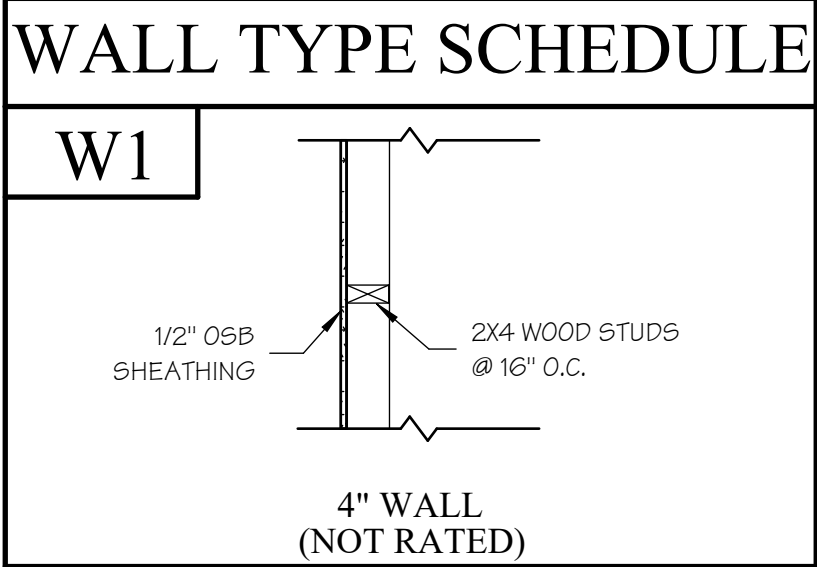
A
GS310
TYP. TRUSS BLOCKING SECTION
SCALE: 1½" = 1'-0"

DOOR SCHEDULE					
TYPE MARK	SIZE	ELEV.	FRAME MATL.	PANEL MATL.	COMMENTS
1	8'-0" x 8'-0" x 1 3/4"	A	WOOD	STEEL	DECORATIVE, MULTI-PANEL O.H. DOOR



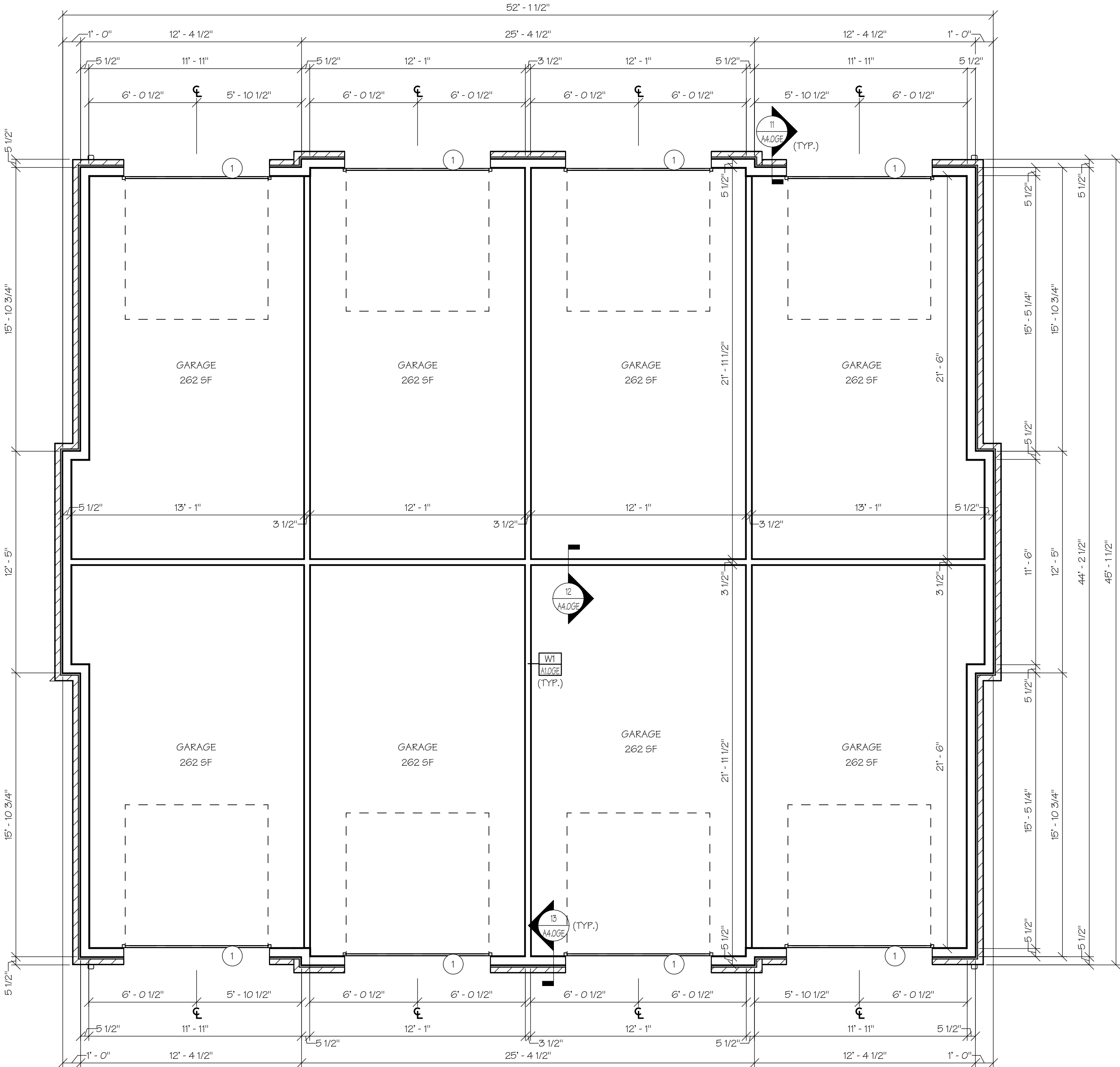
A

GENERAL NOTES	
1)	DIMENSIONS SHOWN ARE FACE OF STUD TO FACE OF STUD
2)	SEAL CONCRETE FLOOR TO REDUCE MOISTURE PENETRATION.



FINISH SCHEDULE				
ROOM NAME	FLOOR	BASE	WALL	CEILING
GARAGE	SEALED CONCRETE	NONE OR NO ADDITIONAL FINISH	PAINTED GYP BD.	PAINTED GYP BD.

SPECIAL INSTRUCTION:
STRUCTURAL DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE OVER ANY DRAWING, DETAIL OR NOTE SHOWN ON THIS SHEET.
CONTRACTORS, SUBCONTRACTORS, AND SUPPLIERS MUST REFERENCE STRUCTURAL DRAWINGS AND/ OR SPECIFICATIONS BEFORE CONSTRUCTING, OR SUPPLYING ANY LOAD-BEARING, OR LOAD-RESISTING ELEMENT SHOWN ON THIS SHEET.



1
A1.0GE

GARAGE "E" BUILDING PLAN/FINISH PLAN

SCALE: 1/4" = 1'-0"

(GARAGE BLDG. G11 - SEE CIVIL)



GAR. G11

RELEASED FOR CONSTRUCTION
As Noted on Plans Review

Missouri State Board of Architecture
Professional Services Department
2012006244
2025 APR 15

M. RANDALL PORTER
2012006244
ARCHITECT

15 APR 2025
M. RANDALL PORTER
ARCHITECT LICENSE#
A-2012006244

ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Wallace
ARCHITECTS L.L.C.
Columbia, MO
P 573-258-7200

WALLACE ARCHITECTS, LLC
MISSOURI STATE CERTIFICATE
OF AUTHORITY: 2003019614

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1ST ISSUE
15 APR 2025

ISSUE/REVISIONS
15 APR 2025 ISSUE SET

SHEET NO. 1
A1.0GE

JOB NO.
4938

7/23/2025 7:54:53 AM

ISSUE SET



15 APR 2025
M. RANDALL PORTER
ARCHITECT LICENSE#
A-2012006244

ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Wallace
ARCHITECTS L.L.C.
Columbia, MO

WALLACE ARCHITECTS, LL
MISSOURI STATE CERTIFICA
OF AUTHORITY: 200301961-

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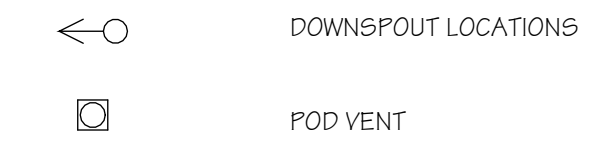
1ST ISSUE
15 APR 2025

ISSUE/REVISIONS
15 APR 2025 ISSUE SET

A2.0GE

JOB NO.
4938

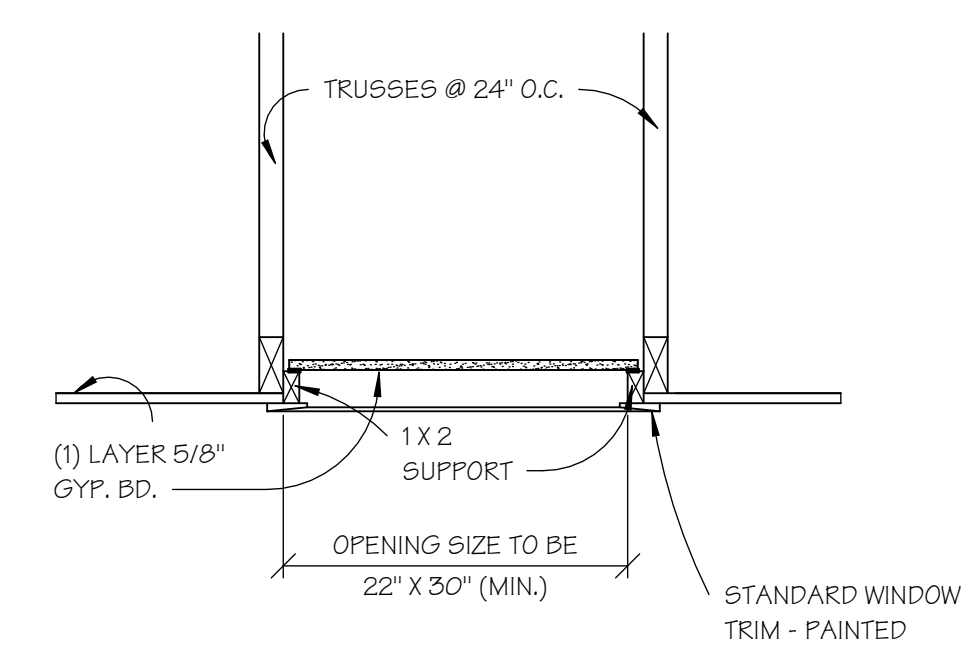
LEGEND



ATTIC COMPARTMENT VENTILATION					
NAME	TYPE	AREA	TOTAL REQ'D VENT. (SQ. IN.)	SOFFIT VENT (SQ. IN.)	ROOF VENT (SQ. IN.)
GARAGE "E"	ATTIC SPACE	2264 SF	1087	543	543

GENERAL ATTIC VENTILATION NOTES

- 1) TOTAL FREE AREA SHALL EQUAL 1/300 OF ATTIC AREAS W/50% OF VENT AREA AT ROOF AND 50% AT SOFFITS.
- 2) SPECIFIED VENTILATION POD QUANTITY BASED ON 80 SQ. IN FREE AREA PER POD. ADJUST QUANTITY AS REQUIRED BASED ON FREE AREA OF SPECIFIC VENTILATION POD USED.

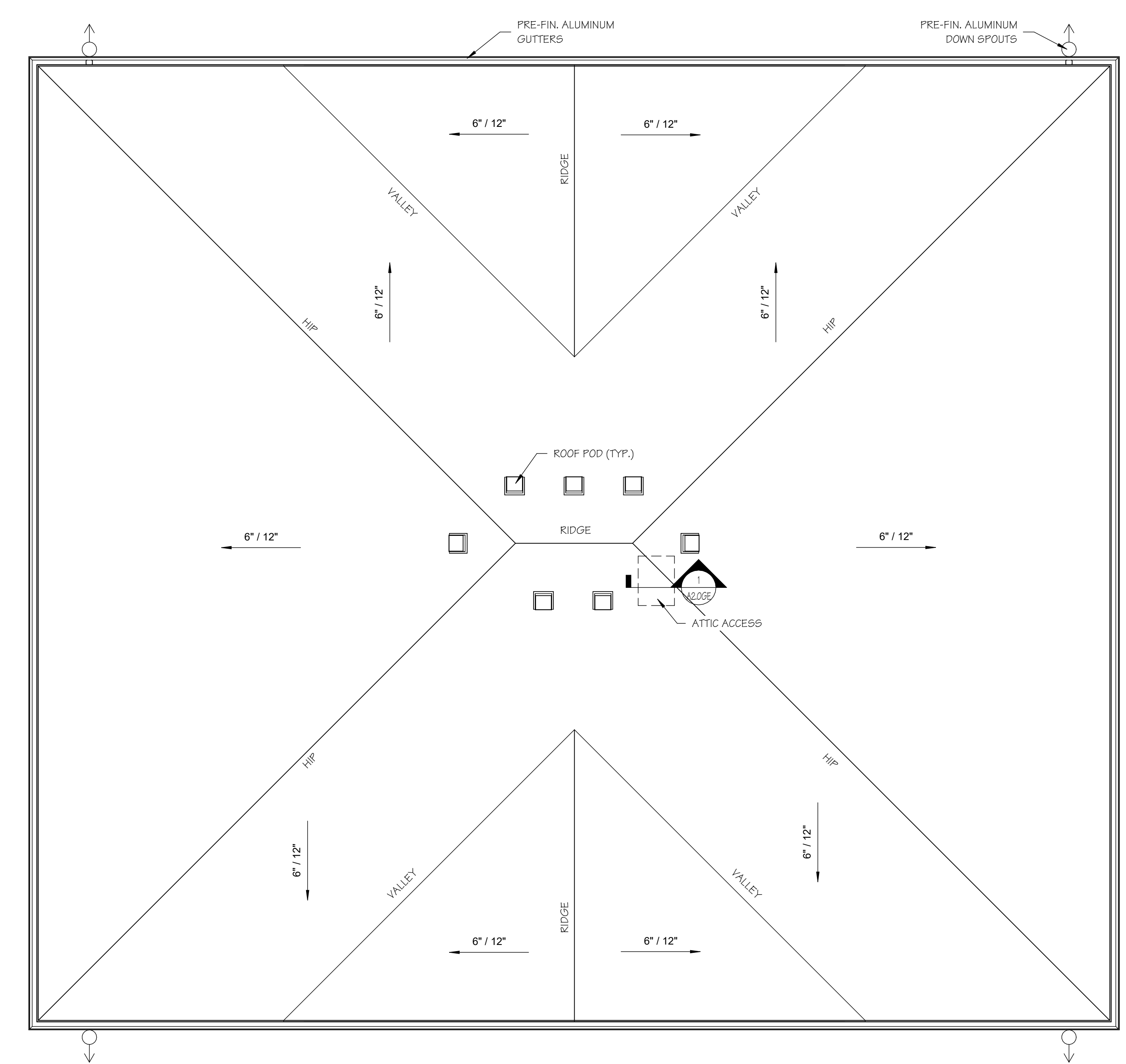


ATTIC ACCESS

1
A2.0GE

ATTIC

SCALE: 1" = 1'-0"



2 GARAGE "E" ROOF PLAN

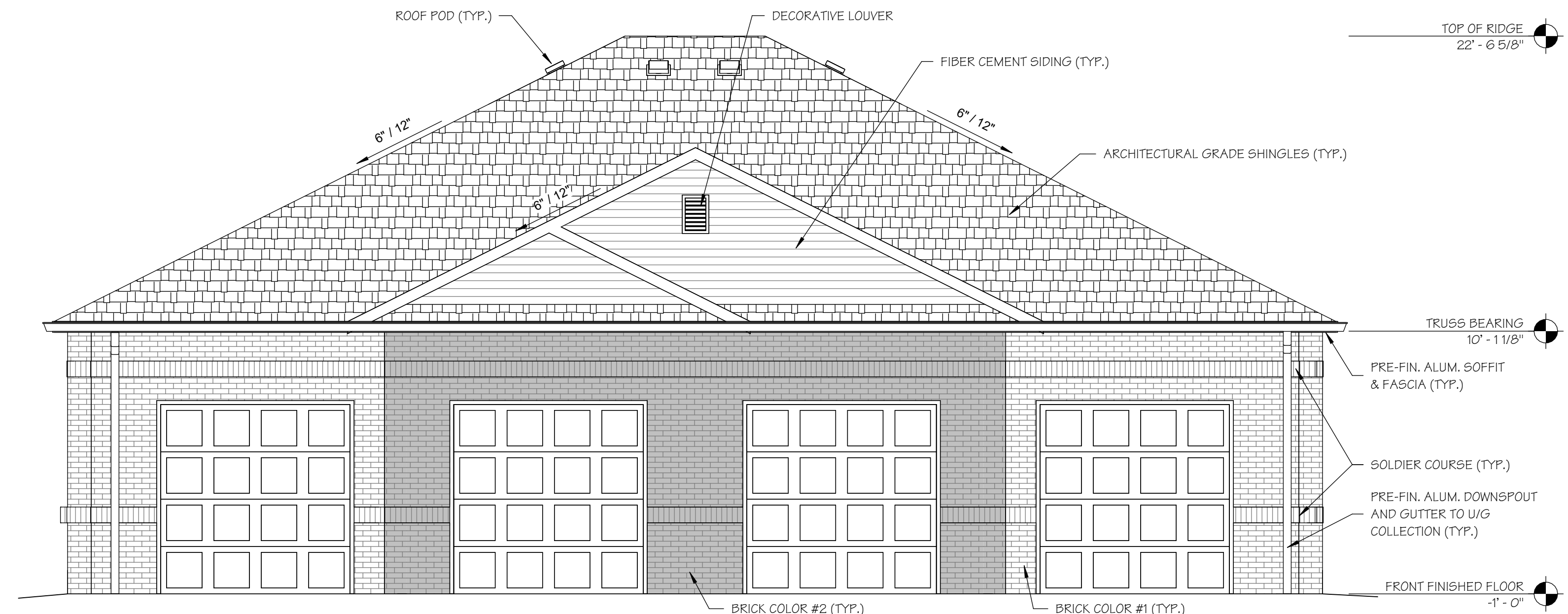
2
A20GE SCALE: 1/4" = 1'-0"

(GARAGE BLDG. G11 - SEE CIVIL)

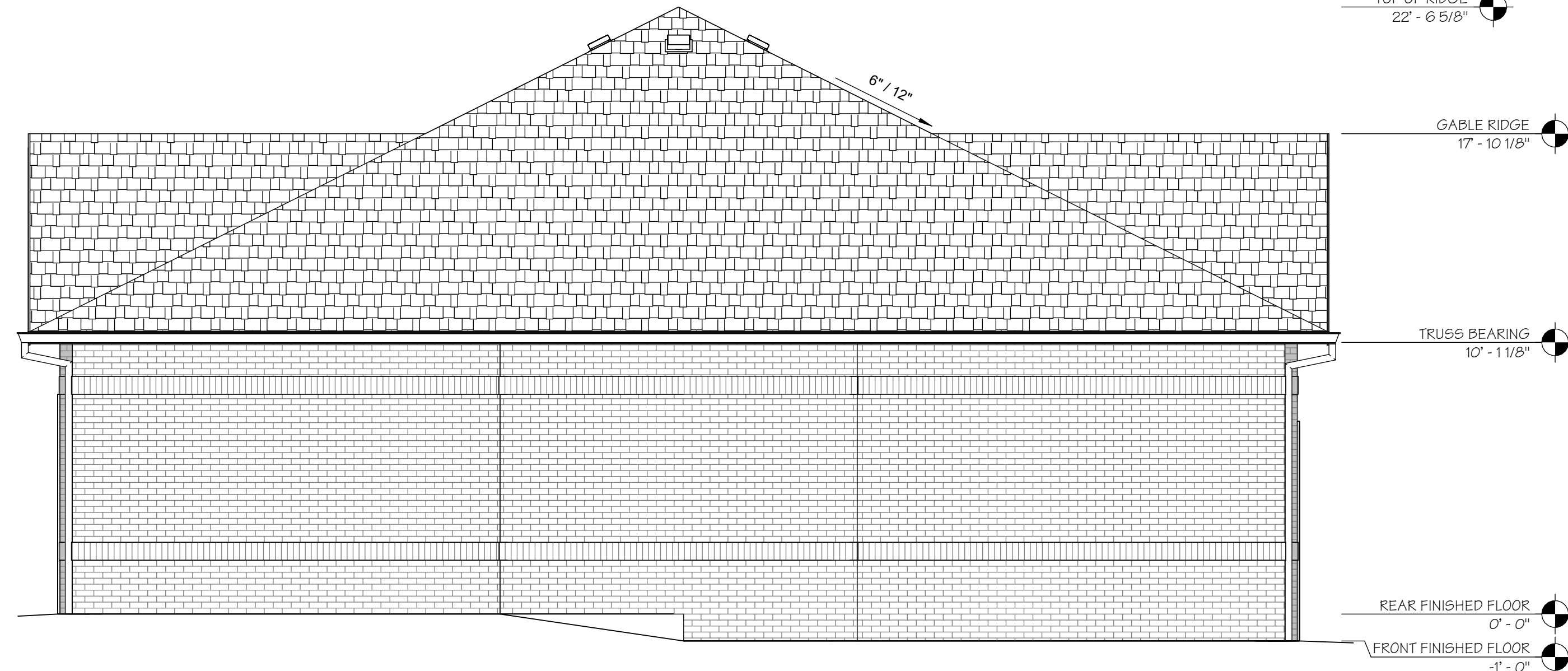


ISSUE SET

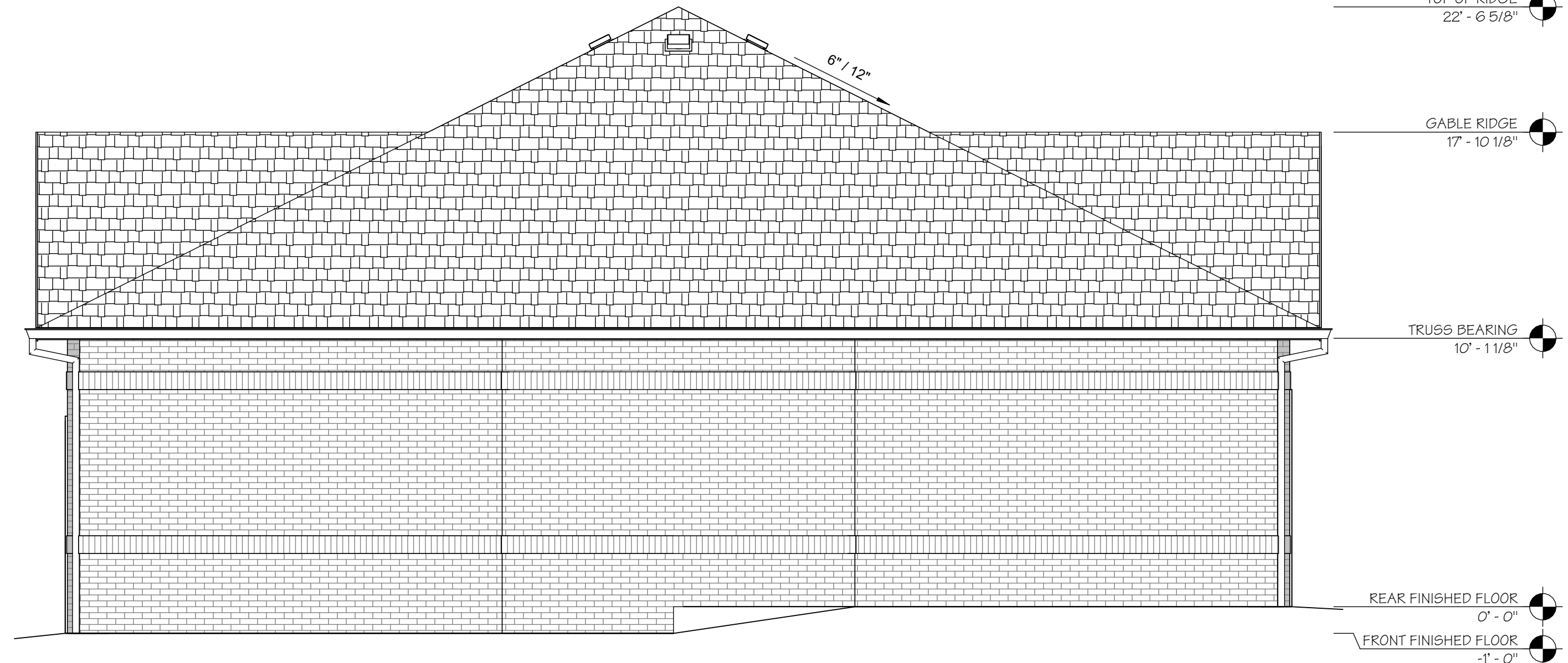
BUILDING NOTES	
1)	BRICK CONTROL JOINTS EVERY 20'-0" MAX.
2)	CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.



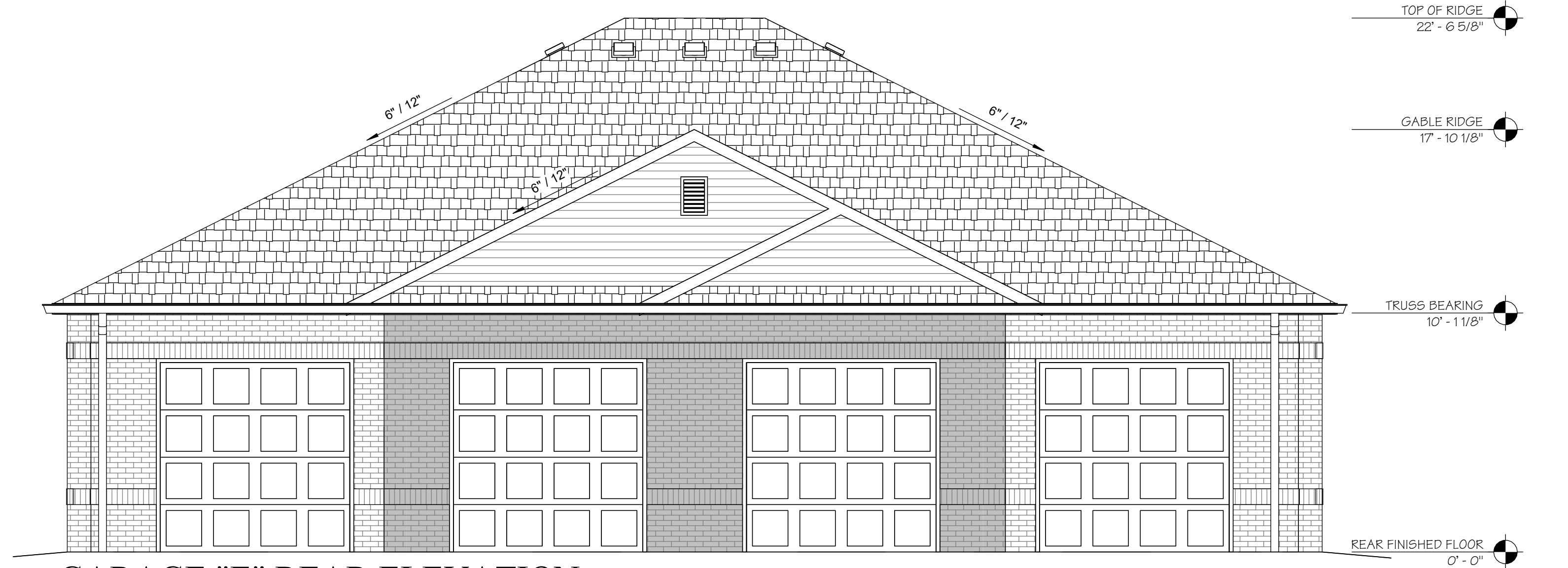
1
A3.0GE
GARAGE "E" FRONT ELEVATION
SCALE: 1/4" = 1'-0"



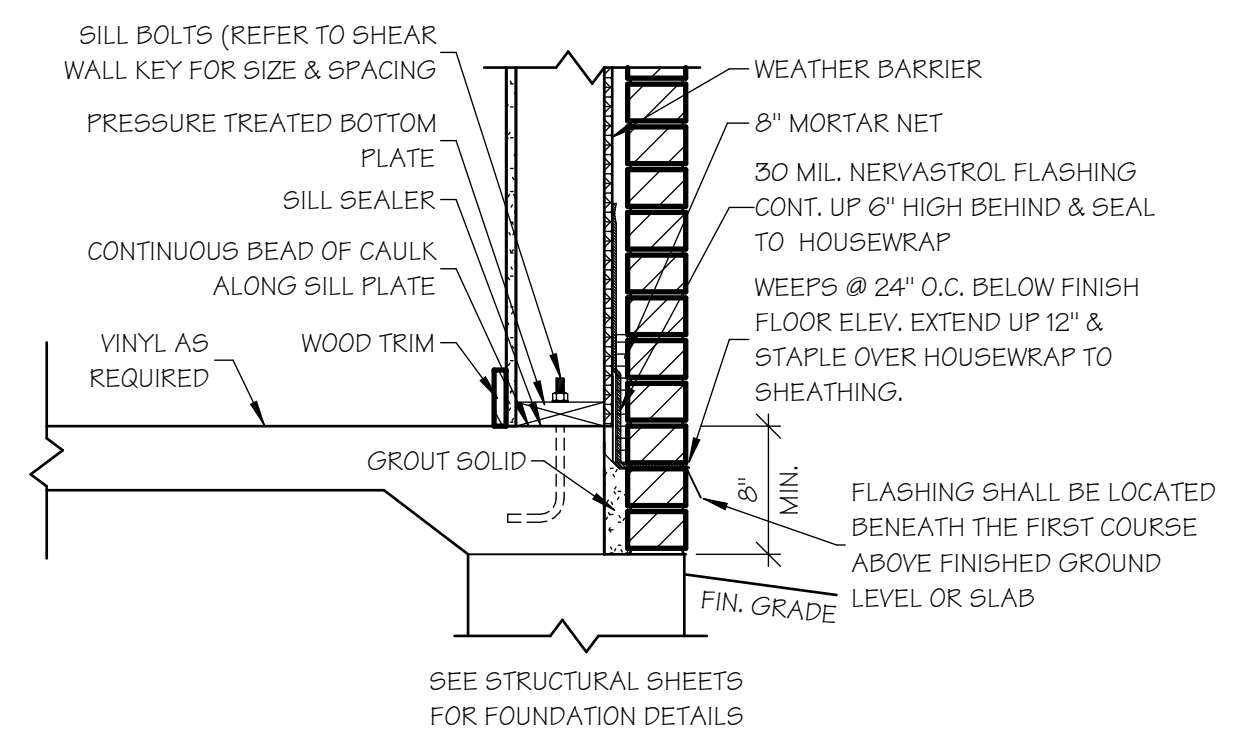
2
A3.0GE
GARAGE "E" LEFT ELEVATION
SCALE: 1/4" = 1'-0"



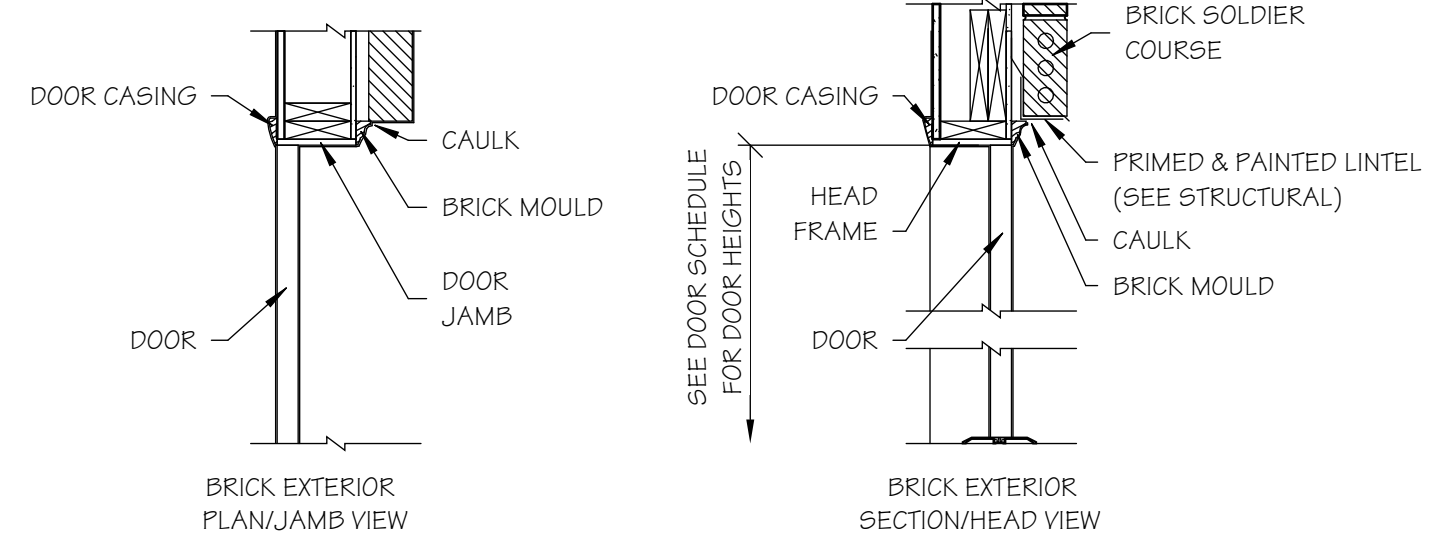
3
A3.0GE
GARAGE "E" RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



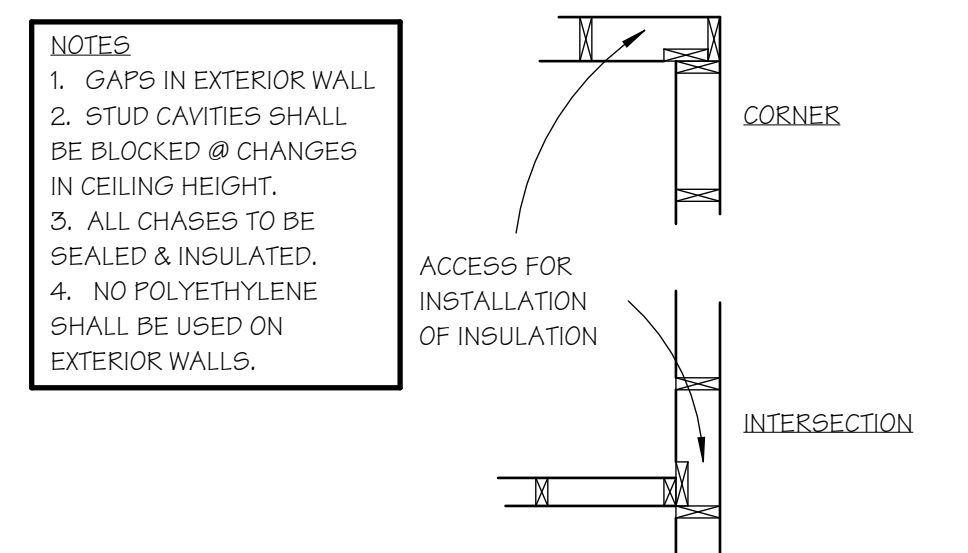
4
A3.0GE
GARAGE "E" REAR ELEVATION
SCALE: 1/4" = 1'-0"



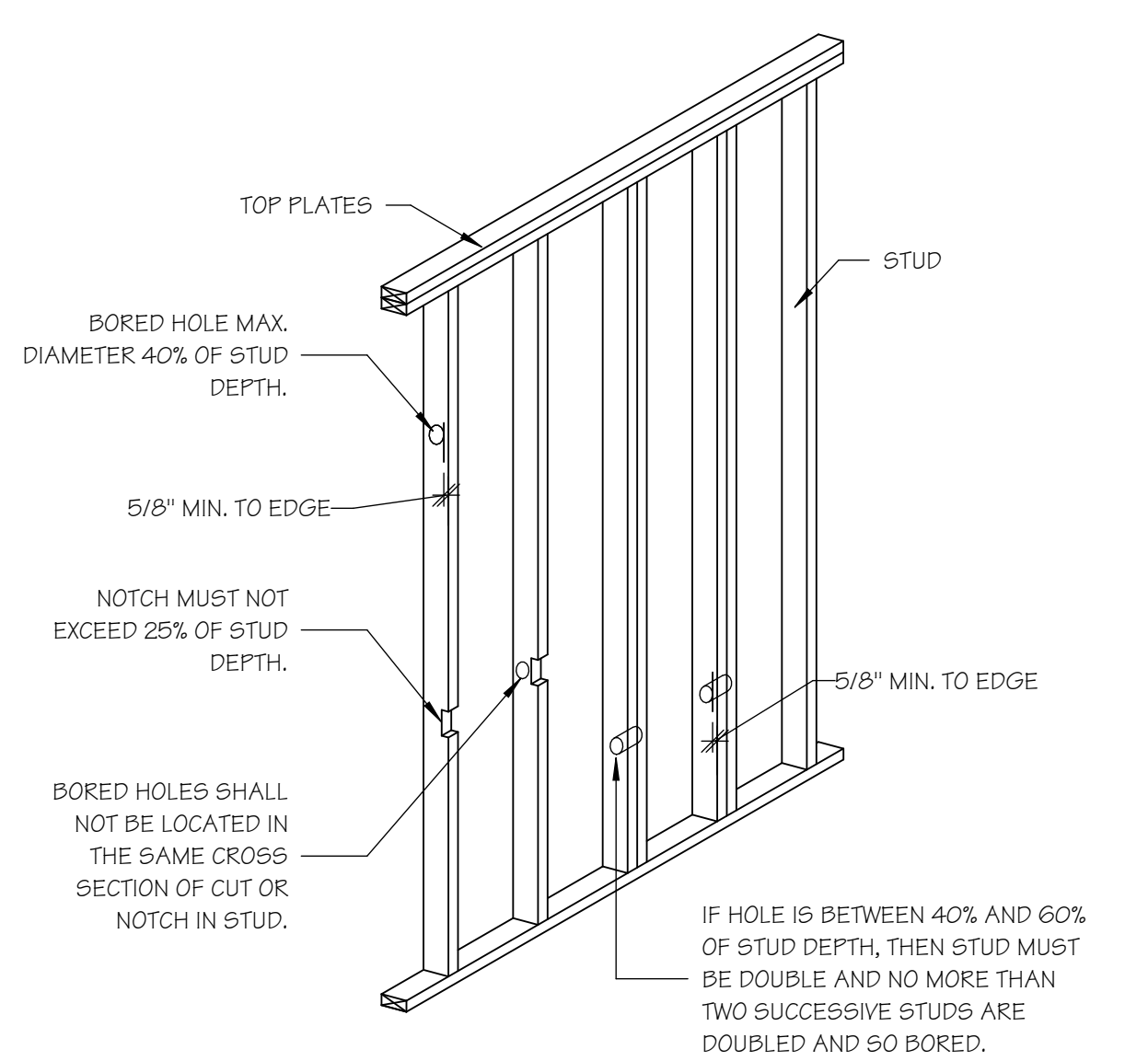
FOUNDATION FLASHING DETAIL
1
A4.0GE SCALE: 1" = 1'-0"



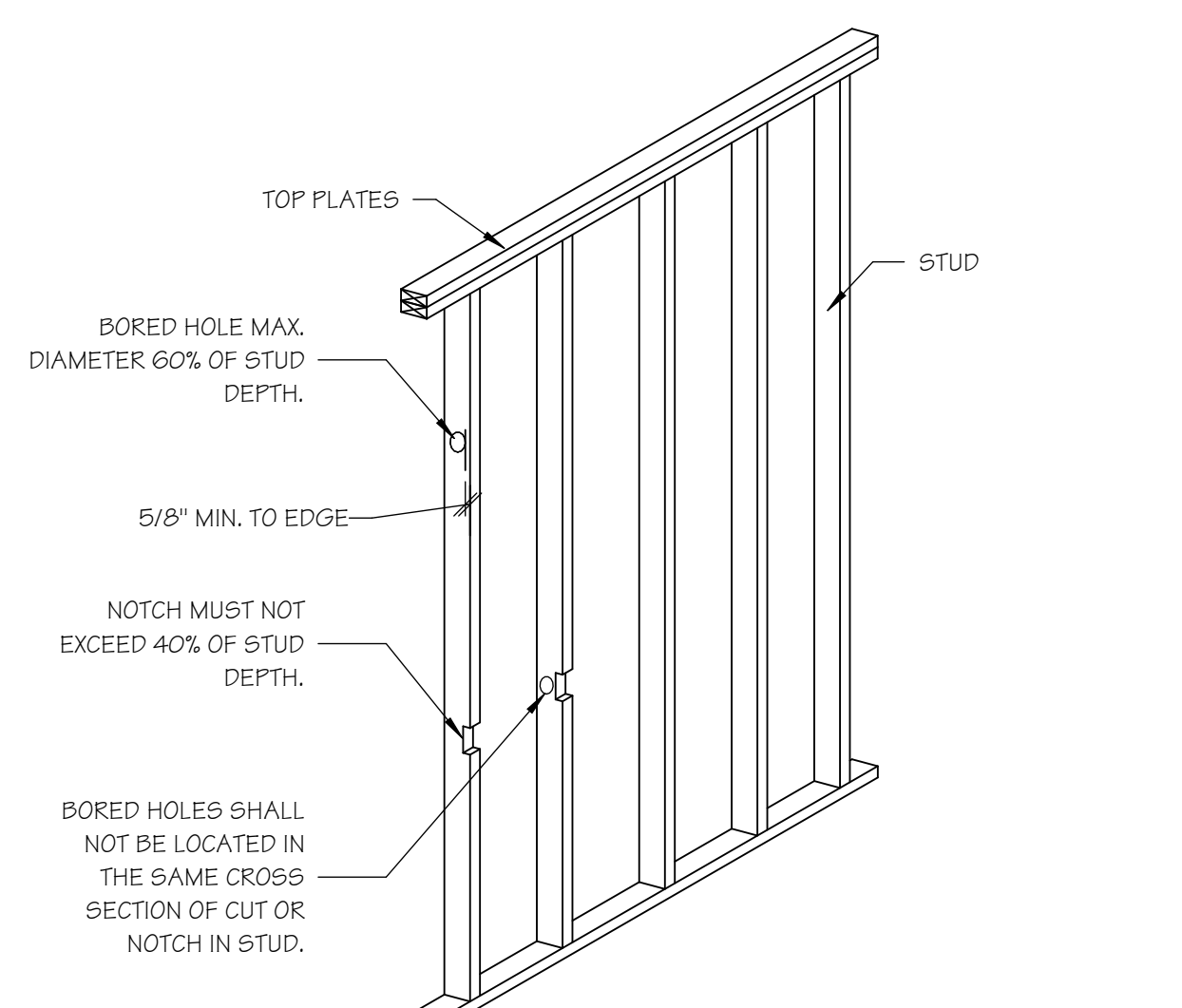
WALL SECTIONS AND DETAILS @ EXTERIOR DOORS
2
A4.0GE SCALE: 3/4" = 1'-0"



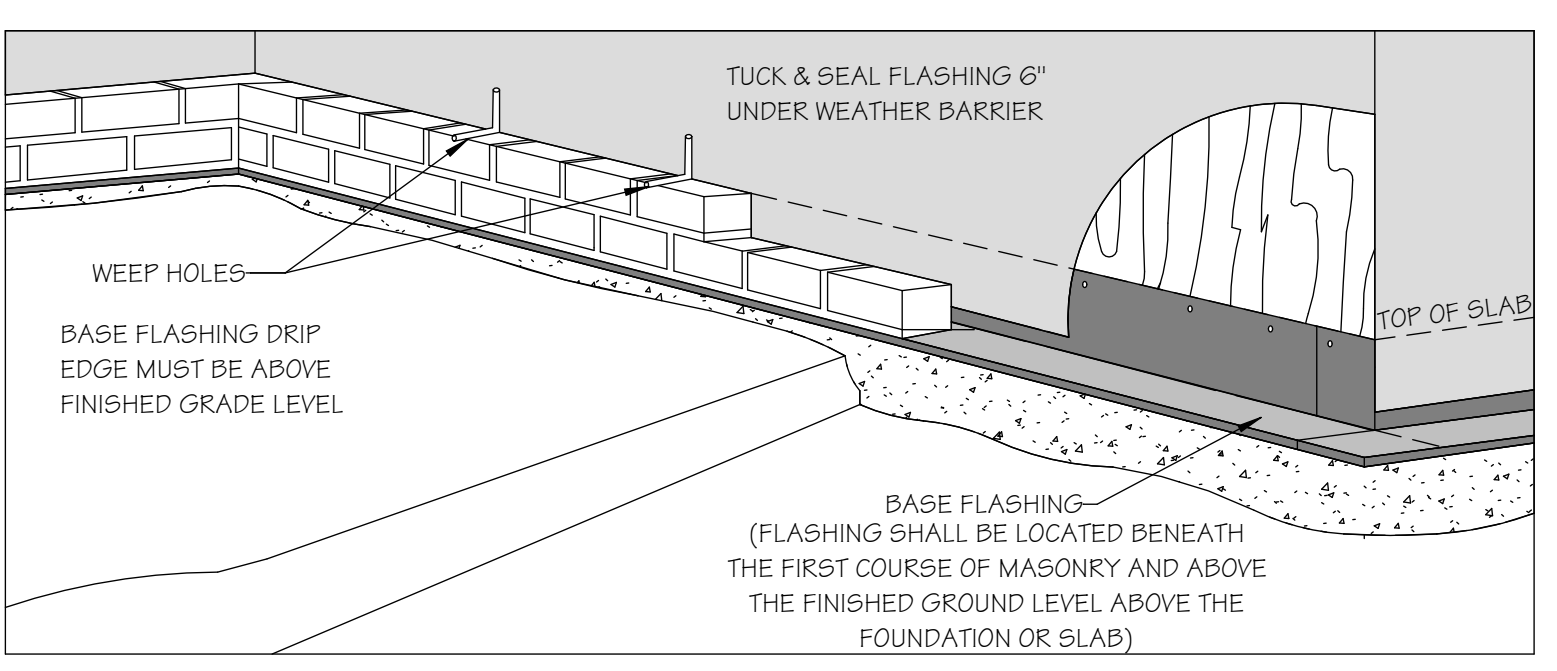
EXT. WALL / ADVANCED FRAMING DETAIL
3
A4.0GE SCALE: 1/2" = 1'-0"



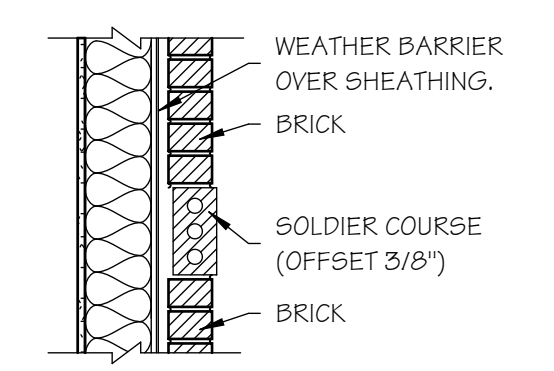
LOAD BEARING WALL NOTCHING & BORING HOLE DETAILS
4
A4.0GE SCALE: 1/2" = 1'-0"



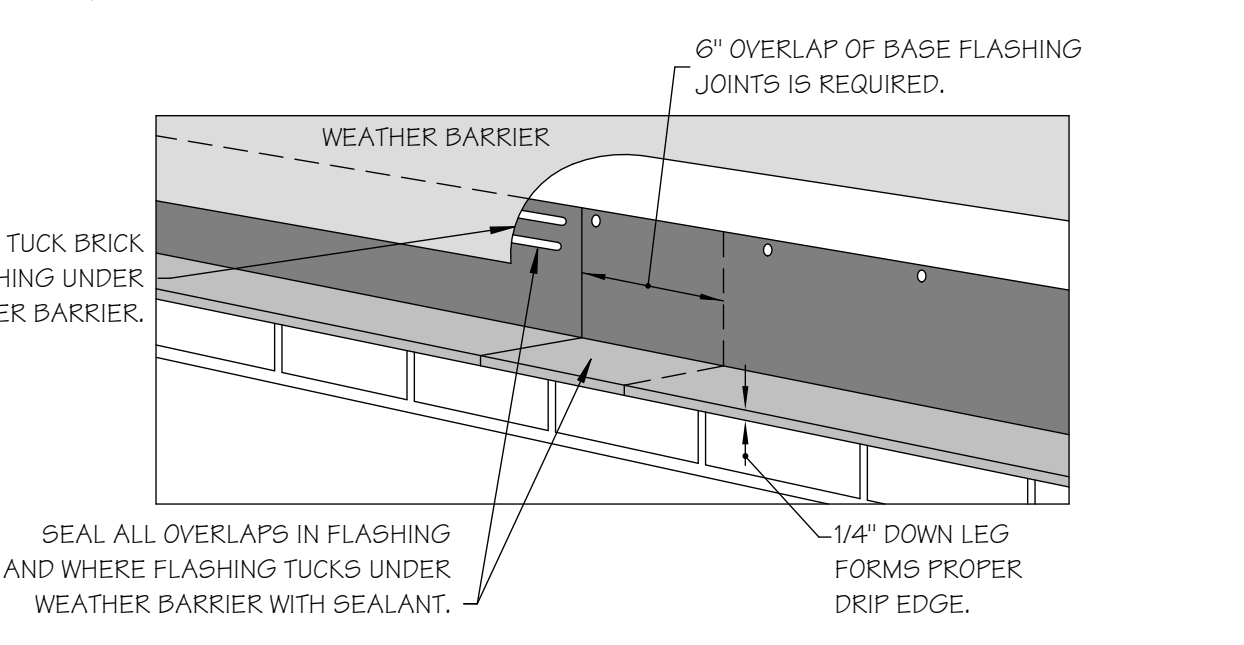
NON-LOAD BEARING WALL NOTCHING & BORING HOLE DETAILS
5
A4.0GE SCALE: 1/2" = 1'-0"



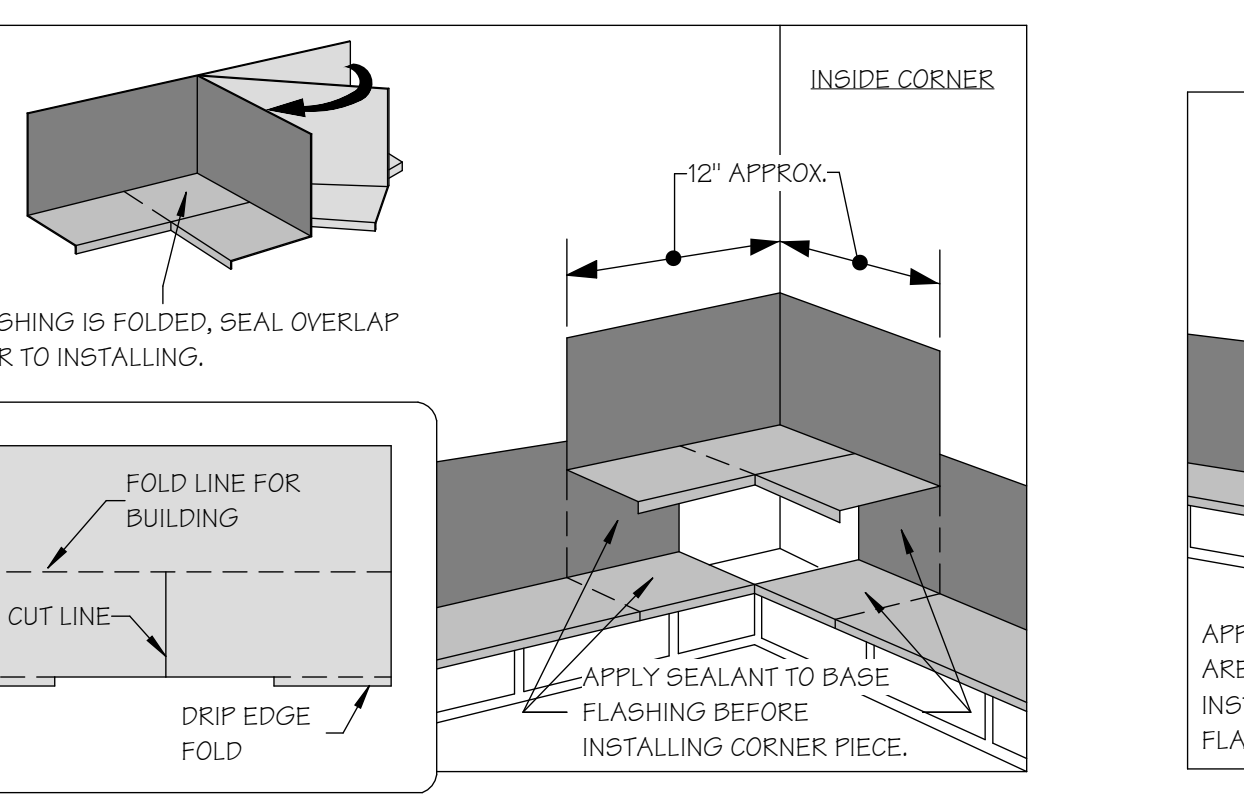
BASE FLASHING @ BRICK
6
A4.0GE SCALE: 3/4" = 1'-0"



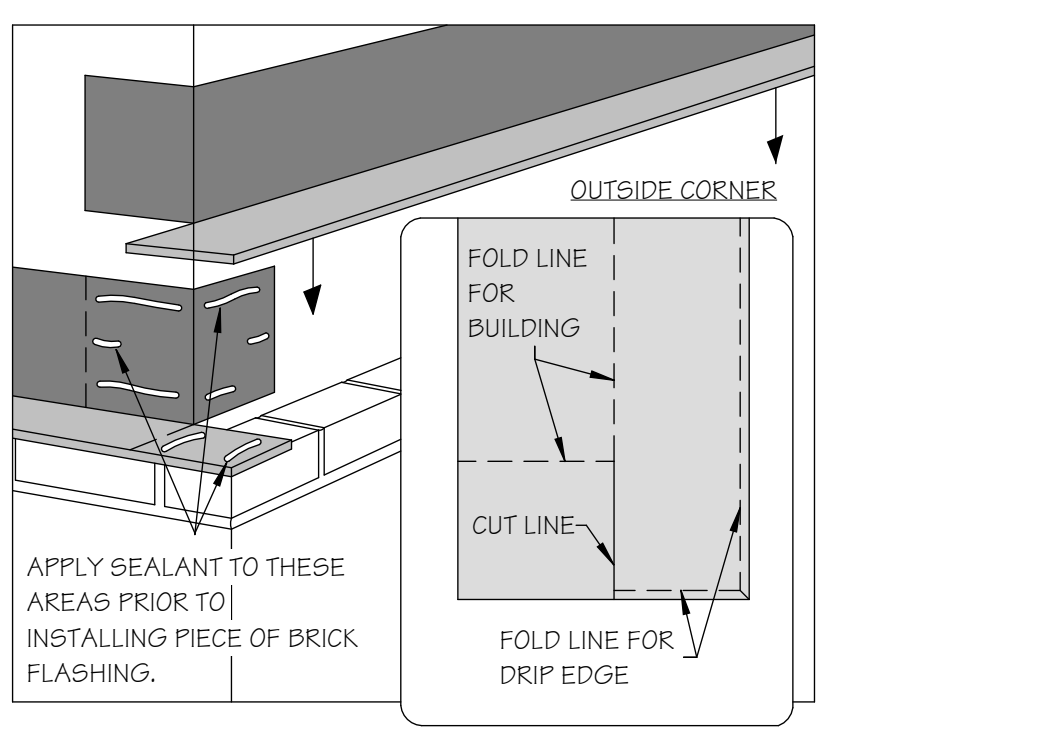
SOLDIER COURSE DETAIL
7
A4.0GE SCALE: 3/4" = 1'-0"



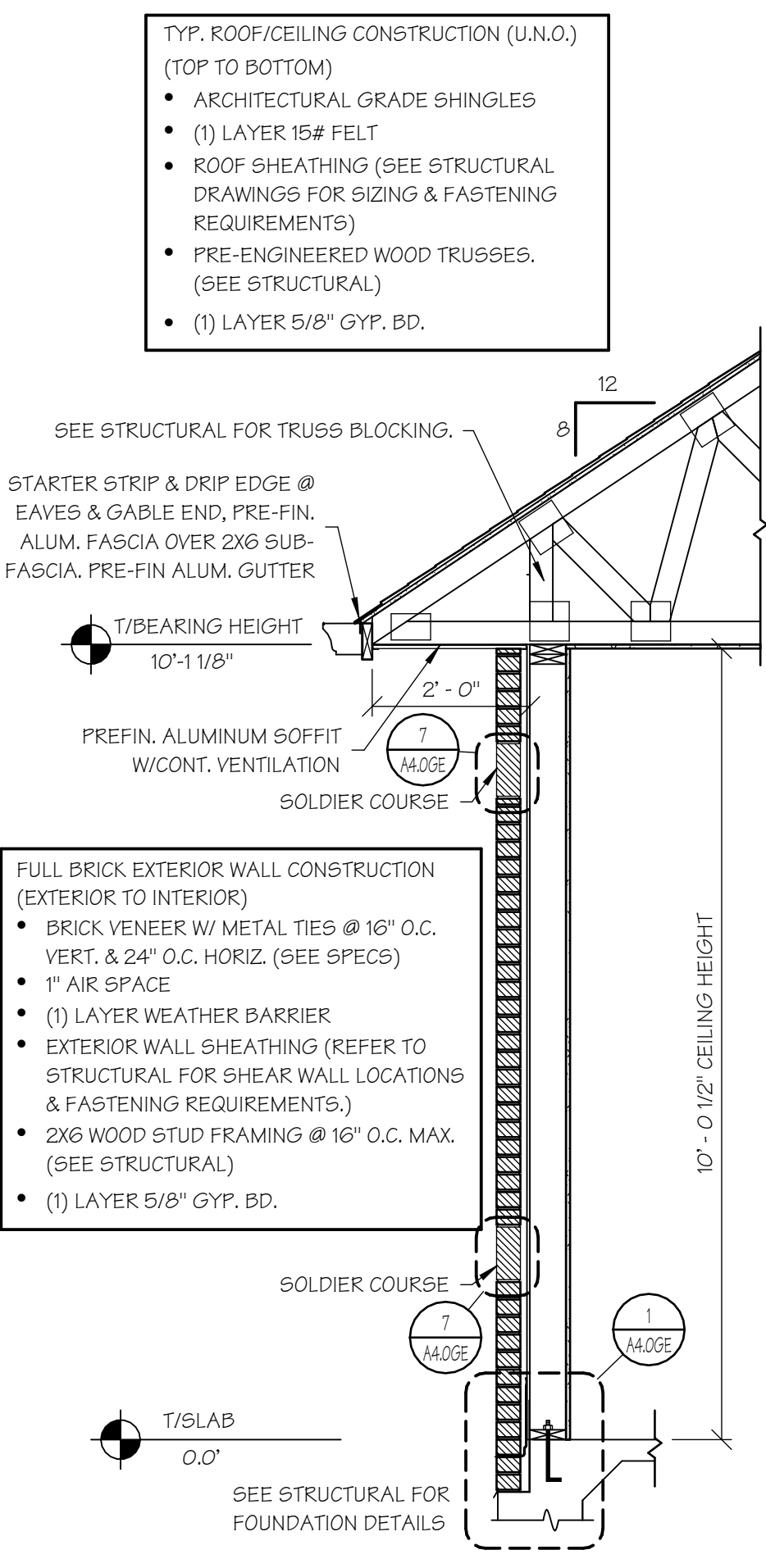
JOINT FLASHING DETAIL @ BRICK
8
A4.0GE SCALE: 3/4" = 1'-0"



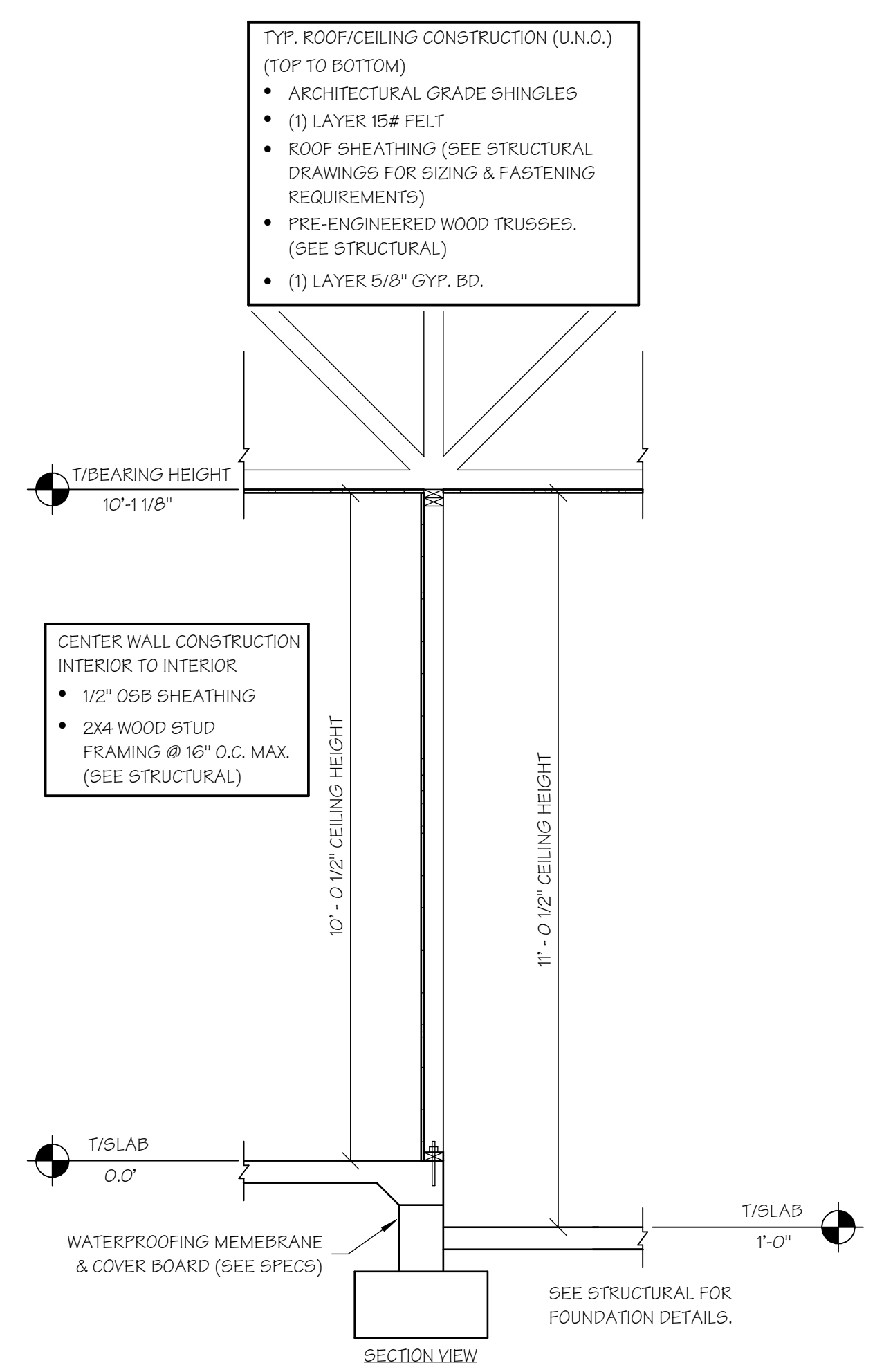
INSIDE CORNER FLASHING DETAIL @ BRICK
9
A4.0GE SCALE: 3/4" = 1'-0"



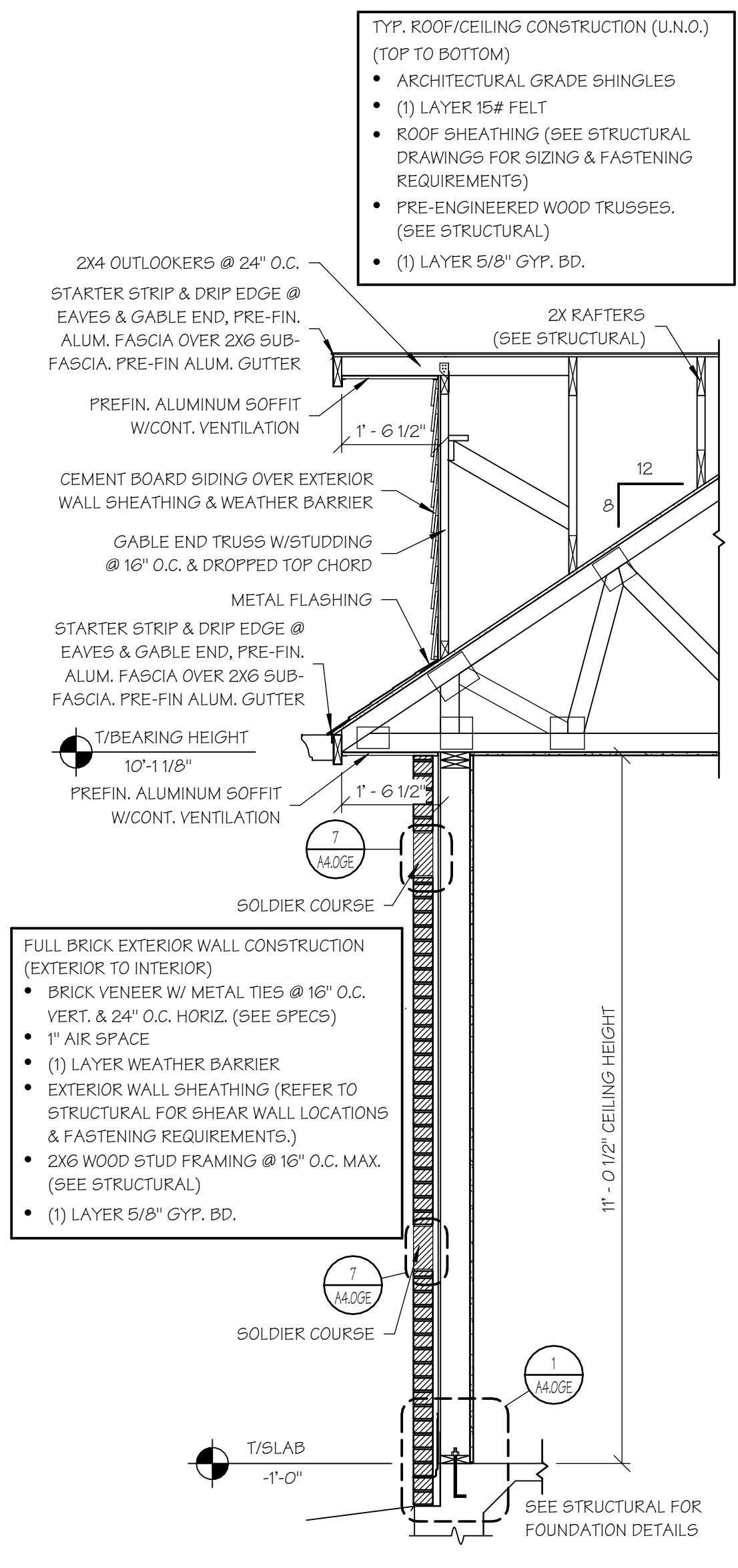
OUTSIDE CORNER FLASHING DETAIL @ BRICK
10
A4.0GE SCALE: 3/4" = 1'-0"



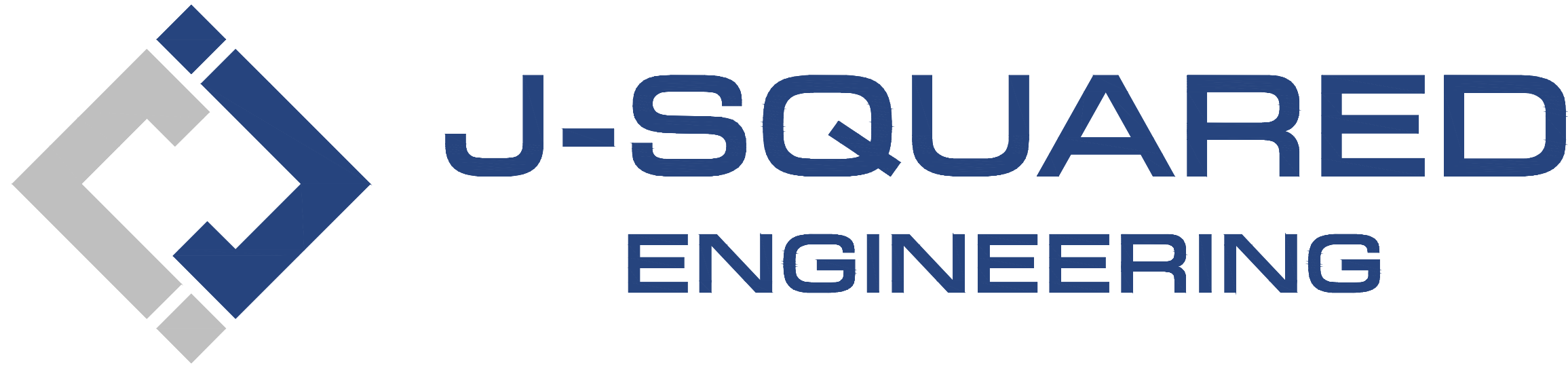
WALL SECTION @ EAVE
11
A4.0GE SCALE: 1/2" = 1'-0"



WALL SECTION @ CENTER WALL
12
A4.0GE SCALE: 1/2" = 1'-0"



WALL SECTION @ RAKE
13
A4.0GE SCALE: 1/2" = 1'-0"



ELECTRICAL DESIGN DRAWINGS FOR:

The Village at Discovery Park Alura Apartments Garage #11

Northeast Douglas Street
Lee's Summit, Jackson County, Missouri

GENERAL MEP SPECIFICATIONS

1. GENERAL
- 1.1.

ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LOCALLY ADOPTED CODES AND ORDINANCES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO REVIEW AND UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS IN CONTRACT DOCUMENTS. EACH CONTRACTOR IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH THEIR TRADE, REGARDLESS OF WHERE WORK IS DEPICTED IN PROJECT DRAWINGS OR SPECIFICATIONS.
- 1.2.

LAYOUT OF SYSTEMS SHOWN ON PLANS ARE APPROXIMATE AND SCHEMATIC IN NATURE. ALL SYSTEMS WILL NEED TO BE FIELD-COORDINATED. CONTRACTOR SHALL INCLUDE THIS COORDINATION IN THEIR SCOPE AND INCLUDE ALL COSTS OF MODIFYING LAYOUT AS REQUIRED IN THEIR BID. PLANS ARE NOT INTENDED TO BE SHOP DRAWINGS FROM WHICH MATERIALS CAN BE ORDERED, FABRICATED, OR INSTALLED WITHOUT ADDITIONAL FIELD MEASUREMENTS AND COORDINATION.
- 1.3.

NOT ALL SPECIFIC PIECES AND COMPONENTS OF EACH SYSTEM ARE DETAILED OR OUTLINED ON PLANS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY PARTS AND LABOR TO PRODUCE A COMPLETE AND FULLY OPERATIONAL SYSTEM UNLESS STATED OTHERWISE ON PLANS. CONTRACTOR IS TO PROVIDE AND INCLUDE ALL EQUIPMENT AND MATERIAL NEEDED TO COMPLETE WORK ASSOCIATED WITH THEIR BID UNLESS ANY ITEMS ARE SPECIFICALLY NOTED ON PLANS AS PROVIDED BY OTHERS. ALL MATERIALS TO BE NEW, FIRST CLASS, AND INSTALLED PER MANUFACTURER'S PUBLISHED INSTRUCTIONS.
- 1.4.

WHERE CONFLICTS EXIST BETWEEN MEP PLANS AND CIVIL, ARCHITECTURAL, OR STRUCTURAL PLANS, NOTIFY MEP ENGINEER OF DISCREPANCIES FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK THAT MAY CONTRADICT INFORMATION ELSEWHERE IN THE PROJECT PLANS.
- 1.5.

THESE PLANS ARE NOT TO BE SCALED. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE THERE IS A CONFLICT BETWEEN ARCHITECTURAL DIMENSIONS AND MEP DIMENSIONS, ARCHITECTURAL SHALL GOVERN.
- 1.6.

CONTRACTOR IS TO INCLUDE IN THEIR SCOPE THE COST OF ALL PERMITS, INSPECTIONS, METERING, TAPS, ETC. ASSOCIATED WITH THEIR WORK.
- 1.7.

CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, CUTTING, CORING, PATCHING, AND BACKFILL REQUIRED TO COMPLETE THEIR WORK, UNLESS NOTED OTHERWISE ON PLANS.
- 1.8.

SPECIFIC EQUIPMENT MANUFACTURERS AND/OR MODEL NUMBERS LISTED ON PLANS ARE TO ESTABLISH A BASIS-OF-DESIGN FOR QUALITY AND PERFORMANCE. VERIFY THAT SUBSTITUTIONS WILL BE ACCEPTABLE PRIOR TO PURCHASE & INSTALLATION.
- 1.9.

NOTIFY ENGINEER OF ANY MAJOR PLAN DISCREPANCIES OR CONFLICTS PRIOR TO PROVIDING BIDS OR COMPLETING ANY WORK.
- 1.10.

SEE DISCIPLINE SHEETS FOR ADDITIONAL TRADE SPECIFIC SPECIFICATIONS.
- 1.11.

WHERE SHUTDOWN OF ANY EXISTING UTILITY OR SERVICE TO BUILDING IS REQUIRED FOR COMPLETION OF WORK, COORDINATE OUTAGE WITH OWNER AS TO NOT DISRUPT TYPICAL OPERATIONS.
- 1.12.
2. WORKMANSHIP
- 2.1.

SYSTEMS SHALL BE INSTALLED IN A FIRST-CLASS MANNER USING BEST ACCEPTABLE METHODS AND PRACTICES.
- 2.2.

ALL SYSTEMS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BUILDING ORIENTATION. COMPONENTS SHALL BE INSTALLED LEVEL AND PLUMB WITH ATTENTION GIVEN TO OVERALL AESTHETICS.
- 2.3.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT LOCATIONS AND SYSTEM ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION.
- 2.4.

CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE THE COMPLETED PROJECT IS RELEASED TO THE OWNER, UNLESS NOTED OTHERWISE ON PLANS.
- 2.5.

DURING INSTALLATION OF MATERIALS OR ACTIVITIES IN NEW WORK SCOPE, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. ANY DAMAGE TO EXISTING SURFACES OR EQUIPMENT SHALL BE CORRECTED AT NO COST TO OWNER.

DEFERRED SUBMITTAL NOTES

1. FIRE ALARM SYSTEM
- 1.1.

FIRE ALARM CONTRACTOR SHALL PROVIDE DEFERRED SUBMITTAL PACKAGE FOR FIRE ALARM SYSTEM. SUBMITTAL SHALL INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, EQUIPMENT SPECIFICATIONS FOR DEVICES AND PANELS, ETC. DESIGN SHALL BE SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.
- 1.2.

FIRE ALARM SYSTEM COMPONENTS SHOWN (IF APPLICABLE) ARE GENERAL AND SCHEMATIC IN NATURE, SHOWN FOR APPROXIMATE ROUGH-IN LOCATIONS AND QUANTITIES ONLY. CONTRACTOR TO VERIFY EXACT DEVICE LOCATIONS AND REQUIREMENTS WITH FIRE ALARM SYSTEM DESIGNER OF RECORD PRIOR TO ROUGH-IN.
2. FIRE SPRINKLER SYSTEM
- 1.1.

FIRE SPRINKLER CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL PACKAGE FOR FIRE SPRINKLER SYSTEM. SUBMITTAL SHALL INCLUDE HYDRAULIC CALCULATIONS AND SPRINKLER SYSTEM DRAWINGS SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.
- 1.2.

WHERE COMBINED FIRE & DOMESTIC WATER SUPPLY LINES ARE SHOWN ON PLANS, INSTALLING CONTRACTOR SHALL VERIFY WITH FIRE SPRINKLER CONTRACTOR THAT INCOMING LINE SIZE IS ADEQUATE FOR FIRE SUPPRESSION SYSTEM.

REFERENCED CODES IN EFFECT

- PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES LISTED BELOW, BUT THIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND LOCAL REQUIREMENTS.
- 2018 INTERNATIONAL MECHANICAL CODE
 - 2018 INTERNATIONAL PLUMBING CODE
 - 2018 INTERNATIONAL FUEL GAS CODE
 - 2018 INTERNATIONAL FIRE CODE
 - 2017 NATIONAL ELECTRIC CODE

FIRE RATED PENETRATION NOTES

- THIS BUILDING CONTAINS FIRE RATED ASSEMBLIES. SEE ARCHITECTURAL PLANS FOR LOCATIONS AND DETAILS.
- A UL-LISTED FIRESTOP SYSTEM SHALL BE INSTALLED AT EACH PENETRATION OF A HORIZONTAL OR VERTICAL RATED ASSEMBLY IN ACCORDANCE WITH ASTM E814 OR UL 1479.
- EACH CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROTECTION FOR THEIR PENETRATIONS THRU RATED ASSEMBLIES.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING A CATALOG OF ALL UL LISTED FIRESTOP ASSEMBLIES, AND KEEPING A PHYSICAL COPY OF DETAILS FOR EACH USED FIRESTOP ASSEMBLY ON SITE FOR REFERENCE.

SHEET LIST TABLE

SHEET #	SHEET TITLE
MEP1	ELECTRICAL PLAN COVER SHEET
MEP2	SITE UTILITIES PLAN
EP101	POWER PLAN
EL101	LIGHTING PLAN

RELEASED FOR CONSTRUCTION
As Noted on Plans Review

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E.
PE-2015017071
MO Certificate of Authority # 2018029680

April 15, 2025

Services Department
Lee's Summit, Missouri
64025

J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

J2 PROJECT No:	J21357
J2 DESIGN:	ACW
ISSUE TITLE	DATE
PERMIT SET	04 - 15 - 2025

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery Park Alura Apartments

Northeast Douglas Street
Lee's Summit, Jackson County, Missouri

AHJ APPROVAL STAMP

SHEET TITLE

ELECTRICAL
PLAN COVER
SHEET

SHEET NUMBER

MEP1

James Watson, P.E. April 15, 2025
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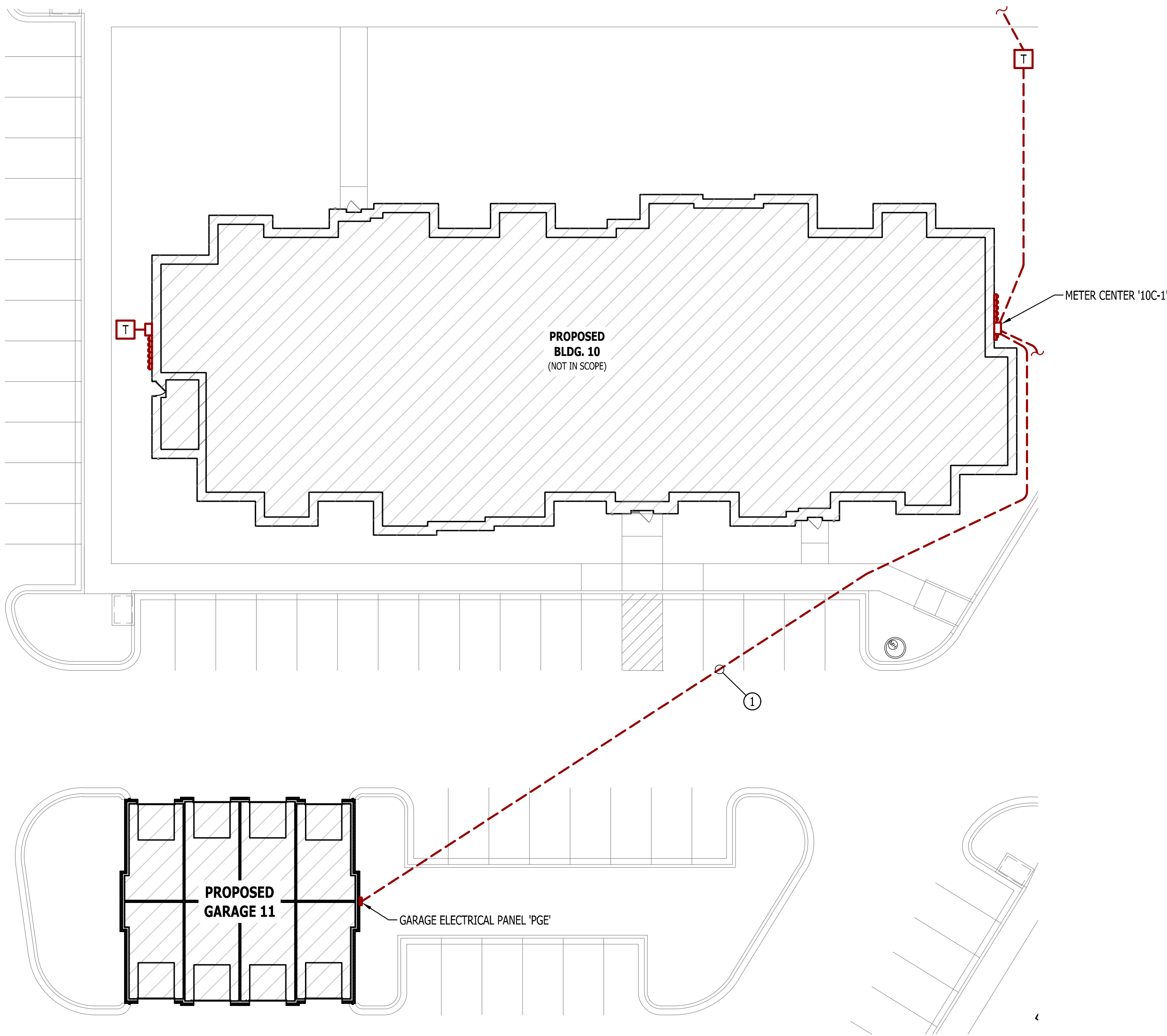
SITE UTILITIES
PLAN

SHEET NUMBER

MEP2

GARAGE PANEL 'PGE' SCHEDULE											
PANEL SPECIFICATIONS						TOTAL CONNECTED LOAD					
VOLTAGE: 120/208V 3-PH			NEMA RATING: 3R			PHASE "A" LOAD:			106	AMPS	
AMPACITY: 200A MCB			PANEL MOUNTING: SURFACE			PHASE "B" LOAD:			138	AMPS	
AIC-RATING: 10KA						PHASE "C" LOAD:			138	AMPS	
CIRCUIT NUMBER	DESCRIPTION	BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUIT NUMBER			
1	GARAGE RECEPTS.	20-1	6	A	5	20-1	OVERHEAD DOOR OPENER	2			
3	EXTERIOR RECEPTS.	20-1	6	B	5	20-1	OVERHEAD DOOR OPENER	4			
5	GARAGE RECEPTS.	20-1	6	C	5	20-1	OVERHEAD DOOR OPENER	6			
7	OVERHEAD DOOR OPENER	20-1	5	A	5	20-1	OVERHEAD DOOR OPENER	8			
9	OVERHEAD DOOR OPENER	20-1	5	B	20	30-2	EV CHARGING RECEPT.	10			
11	OVERHEAD DOOR OPENER	20-1	5	C	20	-	-	12			
13	OVERHEAD DOOR OPENER	20-1	5	A	20	30-2	EV CHARGING RECEPT.	14			
15	EV CHARGING RECEPT.	30-2	20	B	20	-	-	16			
17	-	-	20	C	20	30-2	EV CHARGING RECEPT.	18			
19	EV CHARGING RECEPT.	30-2	20	A	20	-	-	20			
21	-	-	20	B	20	30-2	EV CHARGING RECEPT.	22			
23	EV CHARGING RECEPT.	30-2	20	C	20	-	-	24			
25	-	-	20	A		20-1	SPARE	26			
27	EV CHARGING RECEPT.	30-2	20	B	2	20-1	INTERIOR LIGHTING	28			
29	-	-	20	C	2	20-1	EXTERIOR LIGHTING	30			
31	SPARE	20-1		A			OPEN	32			
33	SPARE	20-1		B			OPEN	34			
35	SPARE	20-1		C			OPEN	36			
37	SPARE	20-1		A			OPEN	38			
39	SPARE	20-1		B			OPEN	40			
41	SPARE	20-1		C			OPEN	42			

NOTES:
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"
B: ELECTRICIAN SHALL VERIFY EXACT EQUIPMENT OVERCURRENT PROTECTION REQUIREMENTS PRIOR TO PURCHASE & INSTALLATION OF EQUIPMENT.
C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

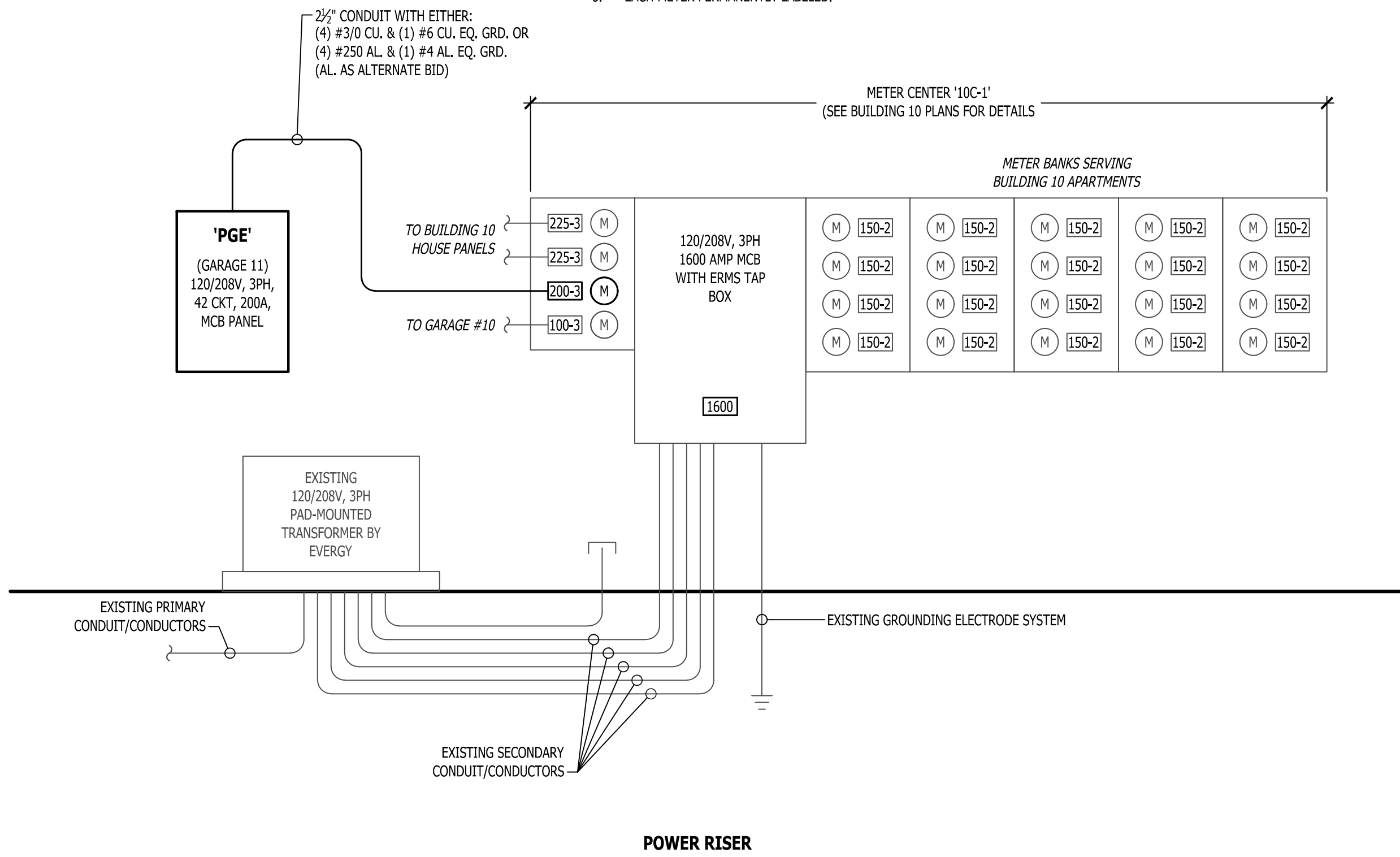


SITE UTILITIES PLAN

SCALE: 1" = 20 ft

POWER RISER NOTES:

- COORDINATE DETAILS & REQUIREMENTS OF NEW ELECTRIC SERVICE WITH EVERGY.
- ALL NEW METERING EQUIPMENT MUST BE APPROVED BY EVERGY.
- EACH METER PERMANENTLY LABELED.



POWER RISER

SITE UTILITIES PLAN SYMBOL LEGEND

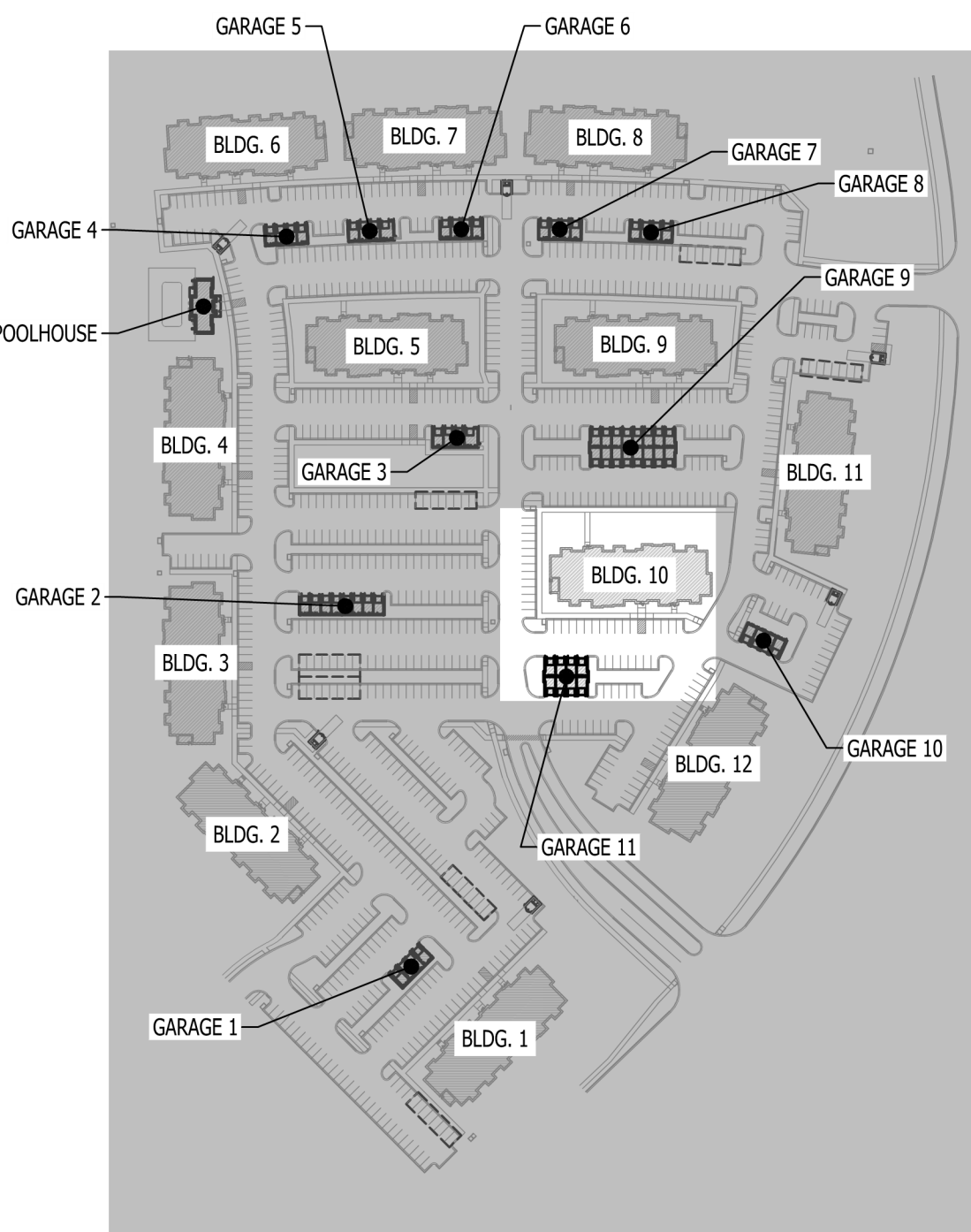
- SANITARY SEWER PIPING
- COLD WATER LINE
- WATER METER
- VALVE
- GAS LINE
- GAS METER
- TIE INTO EXISTING
- ELECTRIC

SITE UTILITIES PLAN GENERAL NOTES:

- REFER TO CIVIL PLANS FOR EXACT UTILITY LOCATIONS, CONNECTIONS, DETAILS, ETC.
- COORDINATE EXACT LOCATIONS OF ALL ELECTRICAL CONDUITS & EQUIPMENT WITH EVERGY.

SITE UTILITIES PLAN KEY NOTES:

- UNDERGROUND CONDUIT/CONDUCTORS FROM APARTMENT METER CENTER TO GARAGE (SEE POWER RISER FOR DETAILS).



SITE KEY PLAN

SCALE: 1" = 200 ft

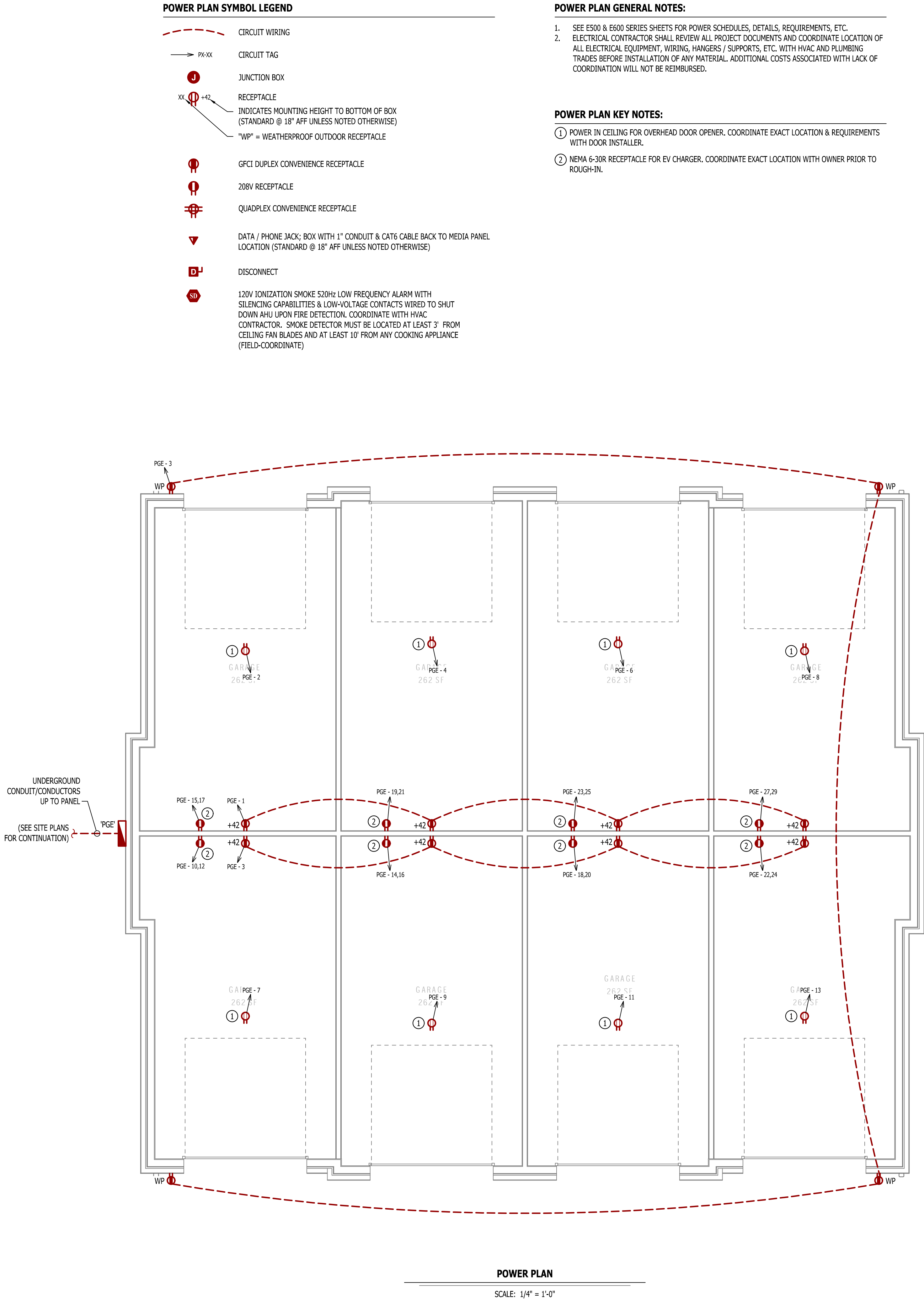
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The Village at Discovery Park Alura Apartments

Northeast Douglas Street
Lee's Summit, Jackson County, Missouri

AHJ APPROVAL STAMP
SHEET TITLE
POWER PLAN
SHEET NUMBER
EP101





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MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery Park Alura Apartments

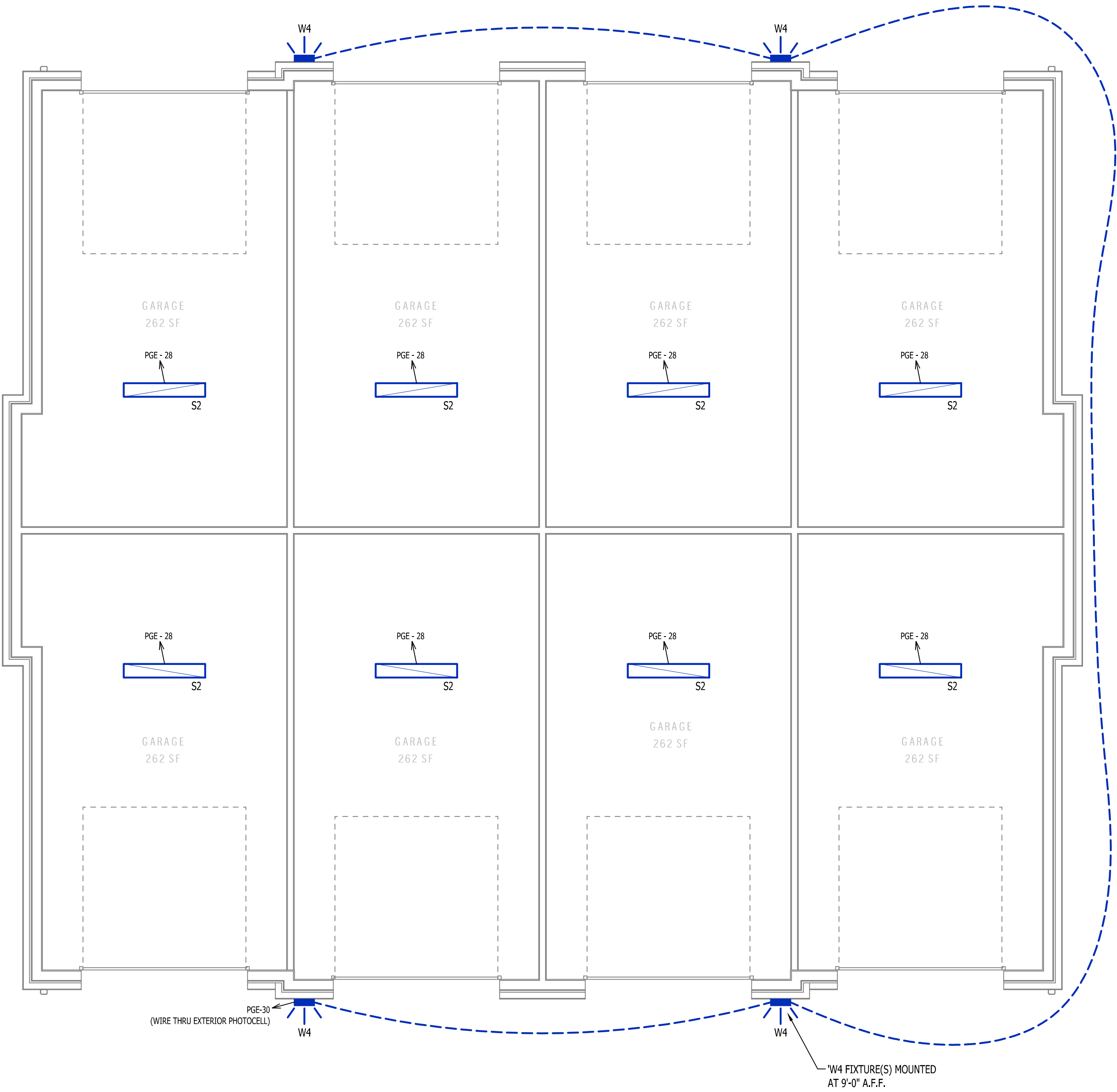
Northeast Douglas Street
Lee's Summit, Jackson County, Missouri

LIGHTING PLAN SYMBOL LEGEND

- X1
- "X1" INDICATES FIXTURE TYPE
(REFER TO SCHEDULE)
- S3
- TOGGLE SWITCH
SWITCH TYPE
- D
- DIMMER SWITCH

LIGHTING PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
- OCCUPANCY/VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE & INSTALL SENSOR WITH SPACING PER MANUFACTURER'S SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURER'S ACCEPTABLE MOUNTING HEIGHT RANGE.
- ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL FIXTURES, WIRING, HANGERS / SUPPORTS, ETC. WITH HVAC AND PLUMBING TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.



POWER PLAN

SCALE: 1/4" = 1'-0"